



EDITORIAL

LETTERS TO THE EDITOR

Readers comment on chemical fallout analysis, a recipe for healthy arteries, dangers of blue-spectrum light, and revelations about Germany's secret spy agency, the DVD.

GLOBAL NEWS

We report on NASA's smart air traffic control for drones, privacy concerns with Australia's new facial recognition system, wireless devices linked to health risks, throat microbiomes and the schizophrenia connection, evidence for the earlier origin of humans, an alleged CIA–Ukraine covert deal to supply TOW missiles to ISIS, and more.

EXTREME RISKS OF PRENATAL ULTRASOUND

By Jim West. Western scientific and medical professionals don't seem to be aware of the many human studies that have been conducted in China which clearly indicate damage from the use of diagnostic ultrasound. It's time that they examined the research.

RISING AUTISM AND THE EPIGENETICS LINK

By Dr Brett I. Cohen. Autism rates are rising alarmingly and may be linked to a transgenerational response to environmental factors, such as nuclear fallout, that switch off key genes. High plasma GABA levels, resulting in abnormal axonal development, are implicated in autism.

SHADOW OF NEMESIS - Part 1

By Jack Heart. Independent researchers in the 1980s to 1990s were stymied in their efforts to redate the Sphinx and investigate the Great Pyramid's shafts by antiquities chief Dr Zahi Hawass, who seems to have a long-term agenda for studying the Giza Plateau.

SACRED SOLIDS IN THE ATOMIC NUCLEUS - Part 1

By Jordi Solà-Soler. The periodic table of the elements can be reorganised into a tetrahedral structure, but it's unclear if electrons can fit into such a pattern. However, a geometric model utilising the Platonic solids suggests how protons in the atomic nucleus may be arranged.

SCIENCE NEWS

In this edition, we present a compilation on the basic concepts of aetherometry, referring to the work of Dr Paulo Correa and Alexandra Correa in defining the dynamic aether as primary mass-free energy in electric (ambipolar) and nonelectric (latent heat) forms.

THE CAUCASIAN MUMMIES OF CENTRAL ASIA

By Patrick Chouinard. The revelation in the early 1990s of Caucasian mummies unearthed in the Tarim Basin in Xinjiang, China, has rewritten the history of migrations between West and East. Genetic testing confirms that the original people were not of Mongoloid origin.

CROP CIRCLES OF 2015: A PERSISTENT INTRIGUE

By Andy Thomas. The crop circles continued their tenacious march onwards this year, and succeeded in surprising, fascinating and confounding in equal measure. With an expanding global reach, they still made their mark in their key centre, the fields of England.

CROP CIRCLE IMAGE GALLERY

Fourteen full-colour images of different 2015 crop circles from various locations around the world.

THE TWILIGHT ZONE

This issue we feature Gerry Cannon's hypothesis that a Second Sphinx may be buried in a mound on the Giza Plateau, north of the existing monument. So far, Egypt's antiquities authorities are unwilling to take this possibility seriously and the mound is yet to be investigated.

REVIEWS-Books

"Taken: Inside the...Abduction Agenda" by Karla Turner, PhD

- "Entwining of Souls" by Judy Roach
- "The End of Days: Armageddon ... " by Zecharia Sitchin
- "Bloodline of the Gods...the Aliens Among Us" by Nick Redfern
- "Tesla Technology" by George Trinkaus

"Restoring the Soul of the World" by David Fideler

[&]quot;Astrology in Ancient Mesopotamia" by Michael Baigent

"Fractals of God" by Kathy J. Forti, PhD "A Future World Vision" by Richard Smith "50 Human Studies: A New Ultrasound Bibliography" by Jim West "Quantum Consciousness" by Peter Smith "Unhealthy Betrayal" by Andrew Burgoyne "The Presidents and UFOs: A Secret History..." by Larry Holcombe "The Third Way" by Joseph P. Farrell

REVIEWS-DVDs

"2015 NEXUS Conference" produced by E&E Productions

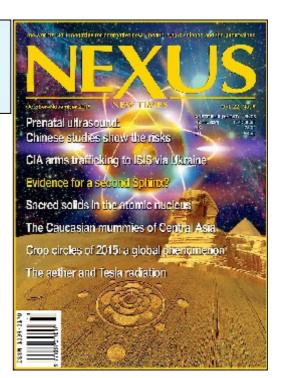
REVIEWS-Music

"Tambolero" by Totó La Momposina y sus Tambores "Melting Pot" by Sol Nation "Joi Sound System" by Joi "La Rumba SoYo" by Ricardo Lemvo & Makina Loca

CARTOONS



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Editorial

What a busy year it has been! In the last 12 months I've travelled to Europe, South Africa and New Zealand; moved house; got engaged and then married; launched a new venture (the Alternative News Project); arranged the Ancient Astronauts tour of Melbourne, Sydney and Brisbane; organised the 2015 NEXUS Conference; and published six issues of NEXUS Magazine.

Speaking of the Ancient Astronauts tour, I'd like to take a moment to mention how impressed I am with Erich von Daniken, author of the influential book *Chariots of the Gods?* Now in his 80s, Erich has energy and passion in equal measure to his humility and sincerity. What a gentleman, indeed!

When you ask him about why he looks so young and has such good health, you expect to hear of some dietary or exercise regime—but no. I suspect that his vigorous health is more due to the fact that every single day he consciously gives gratitude and heartfelt appreciation to God (without being especially religious).

This was revealed to the group of us travelling with him on a bus trip to the "Gosford hieroglyphs" in New South Wales. I sensed, though, that this isn't something that he announces about himself in public.

Later in the tour—after Erich heard my talk on stage about communicating with other life-forms including animals, plants and bacteria—he mentioned (rather shyly) that when he is giving thanks to God each day, he also talks to and gives sincere thanks to all the cells in his body. If any part of his body feels a bit "out of sorts", he gives extra thanks and praise to the cells therein. I'm sure this is something we can all take on board.

The topic of ancient mysteries of Egypt continues in this issue, with an excellent overview article written by Jack Heart. It's a masterful summary of the key events and players of the last few decades of non-mainstream archaeological investigation into the Sphinx and the pyramids on the Giza Plateau.

Also in this issue, we have an article by Gerry Cannon on his research into the possibility that a Second Sphinx lies buried at Giza. As always, it would appear to be a simple case of "Well, why doesn't someone just go and dig there?"

As with other locations, the site of this proposed Second Sphinx seems to be out of bounds as far as Egypt's antiquities authorities are concerned.

Readers interested in the structure of matter and the nature of gravity and magnetism might want to pay attention to the article titled "Sacred Solids in the Atomic Nucleus". I'm told that scientists working on "black projects" use a periodic table of the elements grouped according to the Platonic-solid shapes of the nucleus.

The periodic table that you and I learnt about in school is based on grouping the elements by charge, or valency

(i.e., the number of electrons in the outer shell). It would seem that a more comprehensive understanding of the matter-gravity relationship can be achieved with the geometric perspective. It's little wonder that we mere mortals are not encouraged to re-examine such fundamentals.

While we're exploring this topic, we can't escape considering the existence of the aether as a necessary part of it all, so be sure to get your mind around the subject of aetherometry, as described in Science News this issue.

I've run out of space to mention our health articles, but suffice it to say that I consider them to be essential reading —along with the rest of this issue!

Duncan

Letters to the Editor ...

Chemical Fallout Analysis

Dear Duncan: It is great to see that some scientists are looking up and investigating the pressing issue of worldwide chemical aerosol spraying.

I am referring to the article from the previous issue of NEXUS (vol. 22, no. 5), titled "Aluminum poisoning of humanity and Earth's biota by clandestine geoengineering activity", written by Dr J. Marvin Herndon.

Since October 2014, my family and I have been observing regular spraying conducted by high-altitude aircraft in the sky above central Victoria.

The sprayed trails coalesce into widely dispersing and thin cloudlike formations that eventually form a thin, transparent layer covering the sky that lingers throughout the day. At night, the dust fallout is visible in the beam of a torch, when pointed up in to the sky, as a thick column of dust interspersed with shiny, metallic-like particles.

During the same time-period, we have observed a large quantity of grey dust accumulating constantly in our home. The dust consists of fine particles as well as larger flakes.

We have recently sampled this dust and had it analysed by an analytical laboratory (Microanalysis Australia). The results, which showed the presence of toxic metals such as aluminium, cerium and titanium, prompted me into an investigation and action.

I contacted the Environment Protection Authority (EPA Victoria) to report the observed air contamination and the dangerous constituents found in our dust sample. I was told by the EPA consultant that if the aircraft are observed to spray, they could not help me as they do not regulate air traffic pollution.

They advised me to contact Airservices Australia (AA) to ask them to investigate the aeroplane in question; and if the AA refused to make any investigation, then the EPA advice was for me to contact the Police.

That seemed like a dead end to me, given that aircraft are spraying daily over Victoria and someone obviously knows what is going on.

I decided to follow Dr J. M. Herndon's trail and find out what are common coal ash constituents found in Australia, to see if any of these are also found in my dust sample.

According to Heidrich (2003), aluminium oxide and titanium dioxide are principal constituents of coal fly ash produced in coal-fired power stations across Australia.

These two compounds have also been found in our dust sample, and therefore may come from the coal fly ash produced in Australia.

However, I have yet to account for the presence of cerium found in our household dust. Cerium is a rare earth metal used in catalytic converters, flat-screen TVs, low-energy light bulbs and floodlights.

Nevertheless, my findings so far are forcing me to conclude that whoever is controlling and executing the chemical aerosol spraying in Australia has been buying and using Australian-made coal fly ash to disperse it over the populace.

According to the Material Safety Data Sheets and their health-effect information, if inhaled:

• Cerium oxide may cause irritation to the respiratory tract and mucous membrane; dusts may cause asthma attacks and lung damage such as lung granulomas; large doses or prolonged exposure may cause writhing, loss of muscle coordination, laboured respiration, sedation, hypotension and cardiovascular collapse;

• Titanium dioxide is mutagenic for mammalian somatic cells and can produce organ damage;

• Aluminium is hazardous, known to target the brain and nervous system; it has been long known to be neurotoxic, with mounting evidence that chronic exposure is a factor in many neurological diseases including dementia, autism and Parkinson's disease.

The next step in my investigation is to find a way to sample the air around us, to examine the content and concentrations of these dangerous substances and start contacting local politicians and AA and EPA again.

If we remain silent, we will keep breathing the cocktail of dangerous metallic compounds which will make us all sick and it will not take too long to observe the effects.

Stay healthy and live long.

(References are available on request.)

Sanja Korlaet, BSc (Hons) Broadford, Victoria, Australia email sanyakorlaet@gmail.com

[Hi Sanja. I applaud your investigation, but would have to comment that there are already so many dangerous pollutants in our air that proving a link between what is measured and what is alleged to come from aerosol agents from aircraft would be extremely difficult in any court of law.

When people actually measure and identify the chemicals in their "local" air, they are always shocked. Over 20 years ago, researchers who measured air over the Alps in Europe were astonished to find traces of chemicals used in fragrances and perfumes in every sample that they tested.

The advent of unleaded petrol, which was touted to make the air cleaner and safer, actually made the situation worse because vast amounts of toluene, benzene and xylene were released into the air in easily detectable amounts.

Note also that the main commercial use of cerium is as a fuel catalyst. It is added to fuel to reduce emissions. Whether these emissions come from cars or aircraft or both would also have to be established, as I would expect that everyone who tested their air in populated regions of Australia would find cerium in detectable quantities.

Not every contrail is a chemtrail with an agenda. But every contrail nevertheless does contain dangerous pollutants.

I recommend that if you approach this whole issue from the perspective of purely dangerous chemical pollutants, based on what you are finding, then you will get better attention from scientists and the media than if you assert a chemtrails conspiracy. I look forward to hearing about any of your future findings. Ed.]

Recipe for Healthy Arteries

Dear Duncan: This is a note of appreciation for Azita Vind's article "The Pharmaceutical Deception Exposed" in the current issue of your excellent magazine (August-September, 22/05). I have a quibble when she says: "The only issue here is that cholesterol is integral to fixing the damage in the body's arterial system caused by toxic damage from ingested poisons."

That is hardly the whole story about damage to the arterial linings. Further comment is necessary, I feel, for a fuller understanding of the matter.

Matthias Rath, MD, in his book *Why Animals Don't Get Heart Attacks But People Do*, shows how important vitamin C and the amino acids L-proline and L-lysine in particular are to the health of the arterial linings—all involved in the production of collagen, the essential component of the linings. Weaken the collagen and you invite the protective "Band-Aid" action of cholesterol.

Also involved in the protection of the linings are antioxidants like pycnogenol, beta-carotene and selenium; also the amino acid L-cysteine. But I won't get too carried away on the subject.

I just want to note how important a well-rounded diet is to the elimination of the need for cholesterol to build up on the arterial linings. It is not just due to the ingestion of "poisons" and to dehydration. Otherwise, a very valuable article.

NEXUS is proving its worth over and over again. Keep up the good work, folks.

Sincerely,

"Stan" Stanfield, Long Beach, California, USA

[Cheers, "Stan". That book can be downloaded for free from Dr Mathias Rath's web page <u>http://tinyurl.com/</u> ptzod8s. Ed.] -

Blue Spectrum Light Risks

Hi Duncan. A big thank-you to you and your great team for putting on such a fantastic 2015 NEXUS Conference. It was a brilliant one!

I spoke briefly with you about how I'd recently learned that the type of light given out by today's computer monitors, phones, tablets and TVs can damage the human retina.

My health practitioner had started wearing spectacles earlier this year and he told me there are specially coated lenses that are not for bad eyesight but for eye protection. He'd learned that the LED-sourced blue-spectrum light emitted by today's portable and inhome devices could cause macular degeneration.

Not long afterwards, I was near one of the big optometry stores in Melbourne and called in to ask about this. They told me it was all completely true, and if I wished to choose myself a frame they could have a pair of protective glasses made up for me within one week.

Five days later, my new protective spectacles were in my possession. And what is more, I was able to claim a hefty discount on them via my medical insurance provider.

The special lens-coating is known as Crizal® Prevencia[™], and there is plenty of information online about it.

I have since found I no longer have any hint of eye strain or slight headache whenever I use my devices, even if I spend all day on them. This is fantastic.

No one I'd spoken to about this issue knew anything about it, and I'm more than happy to share what I've learned with your NEXUS audience.

Charles Melbourne, Victoria, Australia

[Thank you, Charles. You have inspired me to put something on the effects of blue light in an upcoming issue. For more information, see the website BlueLightExposed.com. Ed.]

DVD Revelations

Hi Duncan: Thank you for a very powerful current NEXUS issue (22/05), led by the Gordon Duff and Michael Salla articles.

I get the Veterans Today daily email, but in the deluge of alternative news these days I missed the New Eastern Outlook link from which Gordon's article was evidently taken.

I also followed Michael Shrimpton on VT.com and, though I found him compelling, his coverage of the [German] DVD mystified me. Now it all becomes much clearer.

As a lawyer, I am both dismayed and astounded that the British legal system could treat a person in the way it has evidently done. And Shrimpton himself is a practising barrister. What's going on?

And to close, the Ancient Astronauts event with David Hatcher Childress and Erich von Daniken, in Sydney's Wesley Theatre last month [July], was first class.

It was enjoyable being amongst a groomed and courteous group of like-minded enthusiasts, and in such a cosy venue.

Your conduct of proceedings was very smooth and informative, much like your NEXUS editorials, really. The two stars gave of themselves, as all the alternative "conspiracy" celebrities who come to Oz seem to do.

Best wishes,

Allan M. NSW, Australia



NASA PLANS SMART AIR TRAFFIC CONTROL FOR DRONES

Drones could soon be getting their own air traffic control system—and like them, it would be unmanned.

NASA is planning an unmanned aerial systems traffic management (UTM) system that will not require humans to monitor each and every aircraft, as occurs today.

Next-generation drones could be fitted with technology that allows them to hook into the cloud-based UTM system, which would provide constant communication, navigation and surveillance, directing drones and warning them of congestion or severe weather ahead.

NASA hopes to have an experimental version of its UTM system up and running this summer, controlling drone flights over unpopulated land or water. By January 2018, it expects to have Internet-connected drones trialling package delivery over suburbs and rural communities.

The final build, due in March 2019, will allow news-gathering and delivery drones in urban environments, beyond an operator's line of sight and autonomously avoiding other aircraft.

That might not be fast enough to keep up with technology. Amazon anticipates that within a decade, drone operations will dwarf the estimated 85,000 conventional aircraft flights over the US every day.

NASA scientist and UTM project leader Dr Parimal Kopardekar goes further still, saying: "My belief is that every home will have a drone, and every home will serve as an airport at some point in the future."

(Source: NewScientist.com, 30 July 2015, http://tinyurl.com/04dwarj)

EMBRYONIC STEM CELLS CONTROLLED WITH LIGHT

Researchers for the first time have developed a method to control embryonic stem cell differentiation with beams of light, enabling these cells to be transformed into neurons in response to a precise external cue.

The technique also revealed an internal timer within stem cells that lets them tune out extraneous biological noise but transform rapidly into mature cells when they detect a consistent, appropriate molecular signal.

"We've discovered a basic mechanism the cell uses to decide whether to pay attention to a developmental cue or to ignore it," said co-senior author Matthew Thomson, PhD, a researcher in the Department of Cellular and Molecular Pharmacology and the Center for Systems and Synthetic Biology at University of California, San Francisco.

These discoveries have raised hopes that taking control of stem cells could let scientists repair damaged and ageing tissues using the body's own potential for regeneration.

But so far, getting stem cells to follow instructions en masse has proven far more difficult than researchers once expected.

In recent years, scientists have found that many of the genes encoding these developmental cues constantly flip on and off in undifferentiated stem cells.

How the cells manage to ignore these noisy fluctuations but then respond quickly and decisively to authentic developmental cues has remained a mystery.

(Source: ScienceDaily.com, 26 August 2015, http://tinyurl.com/nfthguf)

MISSING LINK FOUND BETWEEN BRAIN AND IMMUNE SYSTEM: MAJOR DISEASE IMPLICATIONS

In a stunning discovery that overturns decades of textbook teaching, researchers at the University of Virginia (UVA) School of Medicine have determined that the brain is directly connected to the immune system by vessels previously thought not to exist.

That such vessels could have escaped detection when the lymphatic system has been so thoroughly mapped throughout the body is surprising on its own, but the true significance of the discovery lies in the effects it could have on the study and treatment of neurological diseases ranging from autism to Alzheimer's disease to multiple sclerosis.

"It changes entirely the way we perceive the neuro-immune interaction," said Jonathan Kipnis, PhD, professor in the UVA Department of Neuroscience and Director of UVA's Center for Brain Immunology and Glia (BIG).

The unexpected presence of the lymphatic vessels raises a tremendous number of questions that now need answers, both about the workings of the brain and the diseases that plague it.

For example, take Alzheimer's disease. "In Alzheimer's, there are accumulations of big protein chunks in the brain," Professor Kipnis said. "We think they may be accumulating in the brain because they're not being efficiently removed by these vessels."

Kipnis noted that the vessels look different with age, so the role they play in ageing is another avenue to explore. And there's an enormous array of other neurological diseases, from autism to multiple sclerosis, that must be reconsidered in light of the presence of something science insisted did not exist.

(Source: ScienceDaily.com, 1 June 2015, http://tinyurl.com/o5v7ym4)

NEWS ITEM FROM 1829 ANNOUNCED ROTHSCHILD PURCHASE OF JERUSALEM

The following news item appeared on page 3 of the 12 October 1829 edition of the *Morning Journal*, based in London, England.

Within days it appeared in other newspapers in England and Scotland, and by early December was appearing in many USA-based newspapers.

The original source is a publication called the *Court Journal*, a weekly London newspaper that ran from 2 May 1829 to 13 March 1925. It was launched by Henry Colburn, a successful publisher. It was created to fill a gap in the press as it was felt that Royal and Court news was not adequately covered in the other newspapers.

King Rothschild. - The following curious extract is from a private letter from Smyrna. We give it without note or comment.

"The confidence of the children of Israel in the words of the Prophet has not been in vain; the temple of Solomon

will be restored in all its splendor. Baron Rothschild, who was accused of having gone to Rome to abjure the faith of his fathers, has merely passed through that city on his way to Constantinople, where he is about to negotiate a loan with the Porte.

"It is stated, on good authority, that Baron Rothschild has engaged to furnish to the Sultan the enormous sum of 350,000,000 piastres, at three instalments, without interest, on condition of the Sultan's engaging, for himself and his successors, to yield to Baron Rothschild for ever, the sovereignty of Jerusalem, and the territory of ancient Palestine, which was occupied by the twelve tribes.

"The Baron's intention is, to grant to the rich Israelites who are scattered about in different parts of the world, portions of that fine country, where he proposes to establish seigniories, and to give them, as far as possible, their ancient and sacred laws.

"Thus the descendants of the Hebrews will at length have a country, and every friend of humanity must rejoice at the happy event. The poor Jews will cease to be the victims of oppression and injustice. Glory to the great Baron Rothschild, who makes so noble a use of his ingots.

"A little army being judged necessary for the restored kingdom, measures have been taken for recruiting out of the wrecks of the Jewish battalion raised in Holland by Louis Bonaparte.

"All the Israelites who were employed in the various departments of the Dutch Administration, are to obtain superior posts under the Government of Jerusalem, and the expenses of their journey are to be paid them in advance."

(Sources: <u>http://tinyurl.com/otvw7ca</u> and various newspaper archive references)

AUSTRALIA TO USE CCTV AND FACIAL RECOGNITION TO TRACK CITIZENS

Stills from CCTV footage shot anywhere in Australia could soon be entered into a national "hub" to scan faces to be matched against driver's licence and passport photos as part of a government plan to make it easier for law enforcement to track the public.

The Australian government is aiming to pool state and territory facial recognition technologies so that stills from CCTV footage taken around the country could be used to identify people of interest to the Australian Federal Police, spy agencies, Customs and Border Protection and other law enforcement agencies.

The Attorney-General's Department has allocated \$12.6 million in funding for the implementation and operation of the hub, and an additional \$5.8 million to assist the states and territories to connect to the hub. According to the department, there are over 100 million facial images held by government agencies that are responsible for issuing ID documents.

Agencies that will have access to the service, initially, will be the Department of Foreign Affairs and Trade, the Department of Immigration and Border Protection, the Australian Federal Police, the Australian Security Intelligence Organisation, Defence and the Attorney-General's Department.

State agencies will be able to participate, but the state governments will first need to consider what technical and legislative changes are needed to bring in the driver's licence databases.

The government wants the service for much more than simple identification based on existing government documents, however. In response to a question on notice from the Senate Estimates hearing, the department confirmed that the system would have the scope to be able to scan CCTV images.

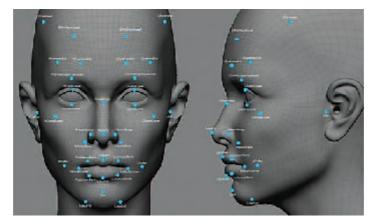
"The capability is designed to share and match 'still' photographs and images only. There will be scope for participating agencies to enrol CCTV images or 'stills' in the capability for the purposes of identification or verification.

However, there will be no capacity to directly link a CCTV feed or licence plate camera to the capability for such purposes," the Attorney- General's Department stated.

State governments are already exploring using CCTV facial recognition technology, with South Australia Police going to tender in January this year for software to identify suspects based on still images in existing police databases, and software with the ability to tap into CCTV footage taken by governments, councils and private cameras in South Australia.

Australia is also relatively late to the game in national facial recognition databases. The Department of Homeland

Security in the United States has reportedly invested hundreds of millions of dollars in grants to local and state governments to build databases on their behalf. Although, at least in the case of the Boston Marathon bombing the technology did not prove useful.



The FBI's facial recognition system stores criminal mugshots and citizen ID photos in the same database. (Image: Electronic Frontier Foundation)

By mid-2016, the Australian federal "hub" is expected to be able to compare two images to see if the faces match, and full functionality to conduct facial searches "will be implemented in a phased approach over time".

While all government agencies that are part of the system will have access to the data, the federal government is arguing that a hub (as opposed to a centralised database) minimises the impact on privacy because the data is not all hosted in the one location.

The design and operation of the hub will also be subject to a privacy impact assessment in consultation with federal and state privacy commissioners.

Earlier in August, the government passed an amendment to the Migration Act that aims to consolidate the collection of personal data into a broad discretionary power to collect data on Australian citizens and noncitizens at the border. This data will likely feed into the new hub.

(Source: Crikey.com.au, 27 August 2015)

WIKIPEDIA EDIT-WARS MAKE IT UNRELIABLE ON CONTROVERSIAL TOPICS

Wikipedia is the world's most popular online encyclopaedia, the sixth most visited website in America, and a research source that most US students rely on. But according to a paper published in the journal PLOS ONE, Wikipedia entries on politically controversial scientific topics can be unreliable due to information sabotage.

Co-author Dr Gene E. Likens is President Emeritus of the Cary Institute of Ecosystem Studies and a Distinguished Research Professor at the University of Connecticut, Storrs. Likens co-discovered acid rain in North America, holds a National Medal of Science, a Tyler Prize, and elected membership in the National Academy of Sciences. Since 2003, he has monitored Wikipedia's acid rain entry.

Likens explains: "In the scientific community, acid rain is not a controversial topic. Its mechanics have been well understood for decades.

Yet, despite having semiprotected' status to prevent anonymous changes, Wikipedia's acid rain entry receives neardaily edits, some of which result in egregious errors and a distortion of consensus science."

In an effort to see how Wikipedia's acid rain entry compared to other scientific topics, Likens partnered with Dr Adam M. Wilson, a geographer at the University of Buffalo, New York. Together, they analysed Wikipedia edit histories for three politically controversial scientific topics (acid rain, evolution and global warming) and four noncontroversial scientific topics (the standard model in physics, heliocentrism, general relativity and continental drift).

Using nearly a decade of data, Likens and Wilson teased out daily edit rates, the mean size of edits (words added, deleted or edited) and the mean number of page views per day. While the edit rate of the acid rain article was less than the edit rate of the evolution and global warming articles, it was significantly higher than the non-controversial

topics.

Across the board, politically controversial scientific topics were edited more heavily and viewed more often.

"Wikipedia's global warming entry sees 2-3 edits a day, with more than 100 words altered, while the standard model in physics has around 10 words changed every few weeks," Wilson notes. "The high rate of change observed in politically controversial scientific topics makes it difficult for experts to monitor their accuracy and contribute timeconsuming corrections."

Likens adds: "As society turns to Wikipedia for answers, students, educators, and citizens should understand its limitations when researching scientific topics that are politically charged. On entries subject to edit-wars, like acid rain, evolution and global change, one can obtain—within seconds— diametrically different information on the same topic.¹ *Source: ScienceDaily.com, 14 August 2015, <u>http://tinyurl.com/ph5pmjw.</u>)*

FINGERPRINT SCANNER CAN CAPTURE YOUR PRINTS FROM METRES AWAY

Recently, the US National Institute of Standards and Technology has funded a number of startups and companies to develop touchless fingerprint readers.

Current biometric fingerprint readers require your touch to authenticate yourself. Contactless biometric technology requires the person's presence, but the fingerprint scanners can sense and read your fingerprint information while you are standing metres away from the scanner.



In the past, we have witnessed security breaches involving fingerprint reading either by remote hacking or by cloning using high-resolution photographs of a target's hand. However, the contactless fingerprint devices don't even require a person's touch in order to steal their fingerprints.

This new technology could be an easier way for hackers to capture fingerprints of users on a large scale. They only need to hold a scanner and have a casual walk in a mall or near their victims.

(Source: TheHackerNews.com, 8 September 2015, http://tinyurl.com/ngmsl7s_)

NEW STUDY SUGGESTS WIRELESS DEVICES LINKED TO MANY HEALTH RISKS

Radiofrequency (RF) emissions from wireless devices are likely linked to a number of health conditions and diseases, such as cancer and various other disorders, a new study suggests.

"Oxidative Mechanisms of Biological Activity of Low-intensity Radiofrequency Radiation", an article published in *Electromagnetic Biology & Medicine,* reviews peer-reviewed scientific literature and concludes that low-intensity RF radiation (RFR) induces biological effects in living cells at the molecular level.

The conclusions section of the study states: "The analysis of modern data on biological effects of low-intensity RFR leads to a firm conclusion that this physical agent is a powerful oxidative stressor for living cell[s]. ...RFR [is] a potentially hazardous factor for human health.

"We suggest minimizing the intensity and time of RFR exposures, and taking a precautionary approach towards wireless technologies in everyday human life."

According to the abstract for the study: "...among 100 currently available peer-reviewed studies dealing with oxidative effects of low-intensity RFR, 93 confirmed that RFR induces oxidative effects in biological systems."

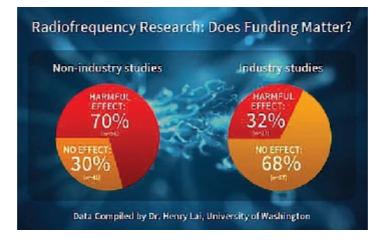


Image source: http://www.emfanalysis.com/research

Supporting statements in the study include: "A new medical condition, so-called electro-hypersensitivity (EHS), in which people suffer due to RFR exposure, has been described.

"This disorder is growing continuously. [and] this category now includes as much as 9-11% of the European population ."

"During recent years, a number of epidemiological studies indicated a significant increase in incidence of various types of tumors among long-term...users of cellular phones."

The new study results are in conflict with the narrative of the telecommunications industry which maintains that RF emissions are "safe" as long as they are below the exposure guidelines based upon the threshold of seeing observable thermal effects in biological tissues.

The effects studied for the reviewed article were for low-intensity RF emissions which are well below those thermally based guidelines.

(Source: SmartGridAwareness.org, 1 August 2015, http://tinyurl.com/qcauopz_)

MICROBIOMES OF HUMAN THROAT MAY BE LINKED TO SCHIZOPHRENIA

Researchers at The George Washington University (GW) have identified a potential link between microbes (viruses, bacteria and fungi) in the throat and schizophrenia. This link may offer a way to identify causes and develop treatments for the disease and may lead to new diagnostic tests.

"The oropharynx of schizophrenics seems to harbor different proportions of oral bacteria than healthy individuals," said Eduardo Castro-Nallar, a PhD candidate at GW's Computational Biology Institute (CBI) and lead author of the study. "Specifically, our analyses revealed an association between microbes such as lactic-acid bacteria and schizophrenics."

Recent studies have shown that microbiomes—the communities of microbes living within our bodies— can affect the immune system and may be connected to mental health.

Research linking immune disorders and schizophrenia has also been published, and this study furthers the possibility that shifts in oral communities are associated with schizophrenia.

Mr Castro-Nallar's research sought to identify microbes associated with schizophrenia, as well as components that may be associated with or contribute to changes in the immune state of the person. In this study, the group found a significant difference in the microbiomes of healthy and schizophrenic patients.

The study helps to identify possible contributing factors to schizophrenia. With additional studies, researchers may be able to determine if microbiome changes are a contributing factor to schizophrenia, are a result of schizophrenia or do not have a connection to the disorder.

(Source: ScienceDaily.com, 25 August 2015, http://tinyurl.com/qcgl2w4_)

DNA FROM NEANDERTAL RELATIVE MAY SHAKE UP HUMAN FAMILY TREE

In a remarkable technical feat, researchers have sequenced DNA from fossils in Spain that are about 300,000 to 400,000 years old and have found an ancestor—or close relative—of Neandertals.

The nuclear DNA, which is the oldest ever sequenced from a member of the human family, may push back the date for the origins of the distinct ancestors of Neandertals and modern humans, according to a presentation at the 5th Annual Meeting of the European Society for the study of Human Evolution (ESHE).

The close affinity with Neandertals, but not with Denisovans or modern humans, suggests that the lineage leading to Neandertals separated from other archaic humans earlier than most researchers have thought.

This means that the ancestors of modern humans also split earlier than expected from the population that gave rise to Neandertals and Denisovans, who were more closely related to each other than they were to modern humans.

This would mean that the ancestors of humans were already wandering down a solitary path, apart from the other kinds of archaic humans on the planet, 100,000 to 400,000 years earlier than expected.

"It resolves one controversy—that they're in the Neandertal clade," says paleoanthropologist Professor Chris Stringer of the Natural History Museum in London. "But it's not all good news. From my point of view, it pushes back the origin of H. *sapiens* from the Neandertals and Denisovans."

The possibility that humans were a distinct group so early shakes up the human family tree, promising to lead to new debate about when and where the branches belong.

(Source: ScienceMag.org, 11 September 2015, http://tinyurl.com/qxspybm_)

CHINA'S MIND-BOGGLING CONSUMPTION OF GLOBAL RAW MATERIALS

Over the last 20 years, the world economy has relied on the Chinese economic growth engine more than it would like to admit. The 1.4 billion people living in the world's most populous country account for 13% of global GDP, which is significant no matter how it is interpreted.

China consumes a big proportion of the world's materials used in infrastructure: 54% of aluminium, 48% of copper, 50% of nickel, 45% of all steel and 60% of concrete. In fact, the country has consumed more concrete in the last three years than the United States did in all of the 20th century.

China buys or mines 23% of gold and 15% of the world's silver supply.

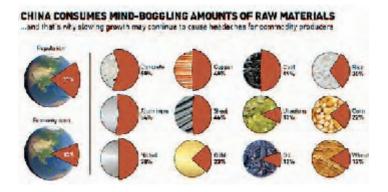


Image source: Chart of the Week, VisualCapitalist.com, 10 September 2015

With many mouths to feed, China also needs large amounts of food. About 30% of rice, 22% of corn and 17% of all wheat produced globally is eaten by the Chinese.

The country is no hack in terms of burning fuel, either. Notably, China uses 49% of coal for power generation as well as metallurgical processes in making steel. It also uses 13% of the world's uranium and 12% of all oil.

(Source: ZeroHedge.com, 11 September2015, http://tinyurl.com/ol3rtjm)

AFGHAN OPIUM BOOMING UNDER NATO OCCUPATION

The "Afghanistan Opium Survey 2015", released by the United Nations Office on Drugs and Crime, reveals that the peak harvest year of 2014 showed little sign of decline. In Badghis Province, the number of hectares under cultivation has more than doubled since 2014. Urozgan Province has also increased on last year, while Helmand Province saw a slight drop of about 10 per cent.

Rumours that NATO is protecting, not eradicating, opium crops continued to grow in early September: "Eleven counter narcotics police were killed and four others were wounded in an airstrike carried out by international forces in the Garmsir District of Helmand Province," said Interior Ministry deputy spokesman Najib Danish.

More and more people are starting to ask questions. One British serviceman has released photos clearly showing men harvesting opium just 200 metres from the perimeter defences of Camp Bastion, a major UK airbase located in Helmand Province.

(Sources: UNODC.org, Afghanistan Opium Survey 2015, <u>http://tinyurl.com/q6p5mr2</u>; RT.com, 8 September 2015, <u>http://tinyurl.com/nzqp7ew</u>; GlobalResearch.ca, 23 August 2015, <u>http://tinyurl.com/owkmoxn</u>)

ISIS TOW MISSILE INVENTORIES CONCLUSIVELY TIED TO CIA-UKRAINE COVERT DEAL

by Gordon Duff, with Jeffrey Silverman and Jim W Dean © 2015

Veterans Today has in its possession indisputable evidence of US corporations involved in trafficking NATO arms intended for Ukraine to ISIS. The players include Bechtel Corporation and British Petroleum, which supplies trucks and security personnel. Drivers are furnished by Turkish intelligence. A parallel ratline moves jihadists from Russia through Georgia and into Turkey, and on to ISIS and al-Qaeda.

Georgia's Ministry of Interior is, minimally, turning a blind eye. The Kiev junta is in this up to their necks. There is also evidence that the CIA is totally aware, but no evidence that they are complicit. There is, however, evidence that the CIA, NSA and DIA are withholding intelligence from the White House on this national embarrassment.

Veterans Today staffers in the Republic of Georgia have been detained by Ministry of Interior officials for asking questions and gathering information—what we are saying, of course, is "for being journalists".

The redirected aid, including first-line US TOW missiles, is part of a covert arms deal backed by the US Department of Defense to provide end-user certificates for weapons to specific factions in Ukraine— weapons that are then sold

and transited to Georgia and on to ISIS.

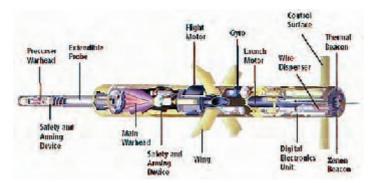


Diagram of the US TOW 2A wire-guided anti-tank missile (Source: www.army-technology.com/projects/tow/ tow7.html))

The only way that ISIS supporters at the highest levels of American public life could direct game-changing weapons to ISIS is by hiding them inside the CIA's covert weapons deal with Kiev.

Such weapons transfers were banned by Congress but approved by Langley and the Pentagon under the massive black-budget carry-over put together by then Vice President Dick Cheney and then Secretary of Defense Donald Rumsfeld back in 2004 and overseen by the Joint Special Operations Command (JSOC).

It seems that JSOC has gone rogue, supplying terrorists across the Middle East and Africa, in concert with Bush-era CIA and Defense contracting firms operating "in the dark" and not answerable to US foreign policy and even White House oversight. We are talking "coup d'etat".

Background

There is no evidence that Raytheon Company or the US Department of Defense is complicit in any criminal act other than, perhaps, sending unauthorised weapons to Ukraine. However, this is the nature of "black ops".

The weapons sent to the Mosul-based Islamic State and its "sisters" are primarily American but include Romanianand Bulgarian-manufactured Soviet-style weapons and ammunition. Most notable is the transit of advanced TOW missiles.

The newer incarnations of this 40-year-old weapons system, typically wire guided, include extended-range advanced warheads and limited "fire and forget" capability.

Note that, officially, the US has not sent any TOW missiles to Ukraine, much less to Georgia or ISIS. However, the missiles that don't exist, do exist and they are travelling on American-owned trucks guarded by US corporate security personnel and Turkish drivers.

How We Learned of This

We know that the big Syrian push in the battle for Idlib in March 2015 was defeated due to TOWs killing all of its tanks, and that 2,500 TOWs had been subtracted from US inventories.

As there have been no investigations over how the TOWs were removed, on whose authority, or how they got into jihadi hands, one could assume that the powers-that-be were not unhappy that they were used to inflict a major defeat on the Syrian Army.

But enquiring minds ask: if this is a no-hands-on, deniable arms transfer to groups that the US has been calling terrorists, then how can operational control over these weapons be maintained to guarantee that they are not used against US Allied targets or US ones?

During the Soviet-Afghan War, Osama bin Laden (Tim Osman his CIA name) and VT's own Lee Wanta were charged with controlling the inventories and their usage to prevent "unauthorized" use by hostile parties. And by controlling, I mean by serial number for every single one, a log of those used and their geographical locations with field commanders.

US al-Qaeda Founders/Controllers Exposed

From a 2013 VT article: "Bin Laden worked directly with White House national security advisors and the CIA. From his headquarters in Islamabad and Peshawar, bin Laden coordinated American activities in Afghanistan and across

the Islamic world.

"In August 1989, bin Laden met with White House intelligence advisor Lee Wanta and CIA station Chief Jimmie Chee to arrange the repatriation of the last 116 Stinger missiles in inventory in Pakistan.

"Details of that meeting are available, a meeting held in English."

The new ratlines, using Georgias high-security port at Poti and taking advantage of Georgia s police state status and Turkey's "get it done" attitude, like the Red Ball Express during World War II, deliver TOW missiles, sarin and mustard gas mortar rounds, and armies of fresh jihadists, and return with human slaves, stolen antiquities and "everything that wasn't nailed down and some that was" from a war-ravaged continent.

Update: Sources within the US Department of Defense confirm the existence of a covert operation that is moving, by air only, TOW missiles into the US Air Force Base at Constanta, Romania, near the Ukrainian port of Odessa. From there, the missiles are delivered by C-130 to Georgia, where they have been offloaded, since February 2015, as "pipeline machinery" assigned to Bechtel Corporation.

It was also confirmed that the CIA is totally aware that these prohibited missiles are being delivered to al-Qaeda and ISIS, despite deep opposition from Secretary of Defense Ash Carter. Last week, Carter criticised Turkey for its involvement in this and similar operations sanctioned by the CIA. *(Source: VeteransToday.com, 31 August 2015, http://tinyurl.com/ncmtfeu.)*

50 SPIES SAY ISIS INTELLIGENCE REPORTS WERE 'COOKED'

More than 50 intelligence analysts working out of the US military's Central Command (CENTCOM) have formally complained that their reports on ISIS and al-Qaeda's branch in Syria were being inappropriately altered by senior officials. The complaints have spurred the Pentagon's Inspector General to open an investigation into the alleged manipulation of intelligence.



Image source: Screenshot from YouTube user Hazzm Movement

The fact that so many people complained suggests that there are deep-rooted, systemic problems in how the US military command, charged with the war against the selfproclaimed Islamic State, assesses intelligence.

Two senior analysts at CENTCOM signed a written complaint sent to the Department of Defense Inspector General in July, alleging that the reports, some of which were briefed to President Obama, portrayed the terror groups as weaker than the analysts believe they are.

The reports were changed by CENTCOM higher-ups to adhere to the administration's public line that the US is winning the battle against ISIS and al-Nusra, al-Qaeda's branch in Syria, the analysts claim.

That complaint was supported by 50 other analysts, some of whom have complained about politicising of intelligence reports for months.

The accusations suggest that a large number of people tracking the inner workings of the terror groups think that their reports are being manipulated to fit a public narrative.

The allegations echo charges that political appointees and senior officials cherry-picked intelligence about Iraq's

supposed weapons program in 2002 and 2003.

Some of those CENTCOM analysts described the sizeable cadre of protesting analysts as a "revolt" by intelligence professionals, who are paid to give their honest assessment, based on facts, and not to be influenced by national-level policy.

The analysts have accused senior-level leaders, including the Director of Intelligence and his deputy in CENTCOM, of changing their analyses to be more in line with the Obama administration's public contention that the fight against ISIS and al-Qaeda is making progress. The analysts take a more pessimistic view about how military efforts to destroy the groups are going.

(Source: TheDailyBeast.com, 9 September 2015, http://tinyurl.com/pk9pxx2)

The Extreme Risks of Prenatal Ultrasound

Western scientific and medical professionals don't seem to be aware of the many human studies that have been conducted in China which clearly indicate damage from the use of diagnostic ultrasound. It's time that they examined the research.

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Adapted from his book 50 Human Studies, In Utero, Conducted in Modern China, Indicate Extreme Risk for Prenatal Ultrasound: A New Bibliography (harvoa, 2015)

Introduction

Western authorities claim that diagnostic ultrasound (DUS) is harmless, based upon their contention that there are no human studies to confirm hazards that have already been found in some animal and cell studies.

However, approximately 50 modern clinical studies on humans have been conducted in China. With few exceptions, these studies have not been acknowledged within the Western realm.

Diagnostic ultrasound is controversial, with known hazards, but research funding has been virtually halted since the late 1980s.

My book supports established critical positions by arguing DUS causation or initiation for autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), personality anomalies, ophthalmological diseases, various malformations, skin diseases and allergies.

I also introduce novel DUS causation concepts for chorioamnionitis, jaundice, cancers and leukaemia.

While DUS causation can be argued alone, there is the practical concept of toxic synergy. In other words, it should be argued that DUS initiates severe vulnerabilities to subsequent stressors such as birth drugs, pharmaceuticals, vaccines, antibiotics, antidepressants, etc. Studies of ultrasound toxic synergy are cited in my book.

Human Studies Exist

The Chinese Human Studies (CHS) are *in utero* human exposure studies conducted during the modern era, 1988-2011. Foetuses were exposed *in utero* to diagnostic ultrasound and the abortive matter was studied in laboratories.

So far, I have collected 48 CHS and 10 overviews that represent the involvement of approximately 100 scientists.

The subjects total 2,651 women volunteering for abortions, where their abortive matter was examined in various stages: the ova of the female foetus, the embryo and the foetus. Recently I have culled duplicate publications from this bibliography. Some of the overviews remain listed as similar versions or duplicates.

With the CHS, we can say the previously unthinkable: that human *in utero* exposure studies are the most abundant form of DUS research in the modern era. The CHS are the last of their kind. Their strength, their relative purity, is derived from their relative freedom from industrial politics. They were conducted during the early bloom of modern industrial Chinese science.

They are a serendipitous by-product of the great Chinese industrial push. A broad scientific foundation for China's industrial progress was initiated in 1984 with the establishment of the State Key Laboratory Scheme, i.e., the institution of a variety of modern laboratories.¹⁵

The CHS occurred during this optimistic phase, before they could share the fate of Western critical studies, before they could be monopolised or repressed or made devices for corporate advertising. That window of opportunity is likely now closed, with China being a major manufacturer of diagnostic and therapeutic ultrasound equipment.

The fate of Western environmental science in general is documented by Dan Fagin and Marianne Lavelle in *Toxic Deception,* first published in 1996. More recently, in 2013, the massive corruption of medical studies has been documented by a New York University professor of journalism, Charles Seife, in his article in JAMA.¹⁷⁴

The CHS utilised the latest scientific analytic technology:various biochemical analyses to reveal changes in tissue,

flow cytometry to discern physical and chemical cell properties, and electrophoresis to visualise DNA fragmentation.

(Electrophoresis is a procedure where direct current is passed through a gel plate that contains samples of chemical mixtures such as DNA. The result is a graphic spread of various DNA molecular components, which are visualised and measured.)

Electron microscopes were used to visualise subcellular damage.

The CHS surpass Western research in technical sophistication, number of subjects studied, era and subject relevancy, and volume of work. Western critical studies, long rejected, are cited and validated by the CHS, examples being MacIntosh and Davey (1970)²⁸, Liebeskind (1979)²⁰, Anderson and Barrett (1979)⁴³ and Saad and Williams (1982).⁴⁴

Western authorities dominate perception of DUS throughout the world. They declare a lack of human studies as the primary reason for maintaining moot any animal or cell studies that find hazards. Western science, held in check by industrial politics, maintains stasis by means of a strong but mere sense of ongoing objective enquiry.

This blocks resolution, with hundreds of animal and cell studies finding, and contradicting findings of, ultrasoundinduced bioeffects. As stated in the introduction of a paper by Ellisman *et al.*:

"Several reviews of the literature on ultrasound bioeffects.reveal that *most studies were inadequately designed* or inconclusive for the human medical situation; information on exposure conditions was frequently *incomplete, markedly different from diagnostic ultrasound* or in some instances sample size and follow-up were less than optimal."¹⁹ (Emphasis added.)

The CHS resolve eight decades of Western limbo. They bring essential information: the intensity thresholds for human safety and damage. They find that low intensities and brief exposures can damage.

As low as these exposure-symptom thresholds are, as horrific their implications, I argue that the implications are worse than the Chinese scientists envision because of the higher intensities employed by Western clinicians and their tendency to use very-high-intensity Doppler mode.

In 2000, Professor Ruo Feng, of the Institute of Acoustics, Nanjing University, summarised the CHS:

"We need to reiterate that in obstetric ultrasound, diagnostic techniques should carefully adhere to a cautious scientific attitude. Specifically, abide by the following five points:

1) Ultrasound should only be used for specific medical indications.

2) Ultrasound, if used, should strictly adhere to the smallest-dose principle; that is, the ultrasonic dose should be limited to that which achieves the necessary diagnostic information under the principle of using intensity as low as possible, the irradiation time as short as possible.

3) Commercial or educational foetal ultrasound imaging should be strictly eliminated. Ultrasound for the identification of foetal sex and foetal entertainment imaging should be strictly eliminated.

4) For the best early pregnancy [1st trimester], avoid ultrasound. If unavoidable, minimise ultrasound. Even later, during the 2nd or 3rd trimester, limit ultrasound to 3 to 5 minutes for sensitive areas, e.g., foetal brain, eyes, spinal cord, heart and other parts.

5) For every physician engaged in clinical ultrasound training, their training should include information on the biological effects of ultrasound and ultrasound diagnostic dose safety."

Professor Feng and the CHS confirm the validity of the National Institutes of Health's Consensus Development Conference Statement of 1984. That document is severely critical, declining to recommend routine DUS. Predictably, it had been pushed aside as "out of date".

Western Science: Crippled

Professor Feng (2000) describes the impaired state of Western science:

"Internationally [outside of China], diagnostic ultrasound safety thresholds are studied mainly in two ways: throughexperimental animals and epidemiological studies.

"This accumulates much data, but only produces a small amount of quantitative rules, at best only serving as a reference for the diagnosis of clinical safety, but unable to provide guiding criteria.

"Diagnostic ultrasound safety standards should establish dosage thresholds based on a large number of human

obstetric ultrasound clinical studies. That is the gap in international research, obviously a major shortcoming!"

With the CHS, Feng was able to place a huge exclamation mark into a scientific journal. His assessment resembles the subtle warnings of Western authorities; for example, Dr Jacques Abramowicz who stated that "the lack of...human data in the field is appalling".⁸⁶

For a while, that warning was echoed in the Wikipedia entry on "Causes of Autism", then removed.²⁷

Feng and his colleagues are the undisputed world leaders of DUS research in terms of science. It should be interesting to see how Western authorities re-engage the challenge presented by the CHS.

Global Awareness of the CHS

Professor Feng (2000) documents global awareness of the CHS and their unrivalled position:

"Yan Gong took the lead in China and completed the first clinical human study, with findings presented in 1988, in Washington DC, at the Fifth World Conference on Biomedical Ultrasound, as published. His article caused a *positive response* from the *international* medical community." (Emphasis added.)

Dr Yan Gong's article is cited in my endnotes.⁹⁶ The positive international response is described on Dr Joseph Woo's web page, "History of Ultrasound in China":

"In 1988, Xin-Fang Wang, Yong-Chang Chou, Wang-Xue Guo, Zhi-Zhang Xu and physicist Ruo Feng were presented with the 'History of Medical Ultrasound Pioneer Award' by the World Federation [for] Ultrasound in Medicine and Biology (WFUMB). The ceremony was held in Washington DC in the United States."⁹⁷

Professor Feng (2000) continues, describing a "special letter" of encouragement that he received in 1989 from Floyd Dunn, PhD, a prominent ultrasound researcher at the Bioacoustics Research Laboratory at the University of Illinois, USA, which he referred to in a paper he wrote in 1990:

"This topic would be extremely difficult, possibly even impossible, to carry out in this country because of a prevailing view regarding abortion. If this could be carried out in your country, in my view, it would be *a major contribution to international diagnostic ultrasound.*" (Emphasis added.)

Dr Dunn was praising China's entry into DUS science with human studies, yet, as of 1989, he had not yet seen much of their results. These studies, the CHS, would eventually undermine his own work where he defends DUS. I could find no further word from Dunn or his colleagues via the online resources of the Bioacoustics Research Laboratory or anywhere else.

Dr Floyd Dunn (d. 24 January 2015) was of the highest political echelon of Western researchers and was close to Wesley Nyborg, William O'Brien, Jr, and Edwin Carstensen. They describe Dunn:

"...[B]iomedical ultrasound is a major industry and basic research in the field receives a significant fraction of the NIH [National Institutes of Health] budget. No single scientist is more responsible for this success than Floyd Dunn."¹⁶²

In terms of industrial economics, Dunn bore a heavy responsibility. Dunn and Feng knew each other. Dunn was a Visiting Professor at the University of Nanjing, where Feng was the editor of *Biomedical Ultrasound*, published by Nanjing University Press.

Ostensibly, no Western medical professionals are aware of the CHS, as can be inferred from their comments listed in chapter 7 of my book.

Dunn evidently kept quiet with regard to "a major contribution to international diagnostic ultrasound", and apparently the entire Ultrasound Community forgot about the 1988 WFUMB conference.

Feng's 2000 article was published 12 years after that WFUMB conference. Since 1990, Feng had written several other related articles. His material was limited to readership in China; nevertheless, he put the CHS into the historical record.

The following scenario deserves consideration. Dunn and his colleagues were/are the standard-bearers of DUS perception, the leaders of "the Ultrasound Community". This term was used, for example, by Dr Thomas Nelson, the then Deputy Editor of the *Journal of Ultrasound in Medicine,* in 2005.²⁶

Nelson's article, "Reporting of Bioeffects Research Results to the Ultrasound Community", describes the scientific formalities and the difficulties in observing and interpreting DUS bioeffects.

The American Institute of Ultrasound in Medicine (AIUM) is part of the WFUMB, under the World Health Organization. It serves as a liaison between government, industry, operators and the public. It is able to gather,

distribute and advise with regard to study funding.

Somehow the CHS and the Western scientists did not connect. Perhaps there was an East-West cultural division. Perhaps the Chinese were put off by some Western etiquette.

Perhaps the Ultrasound Community was just too Western-centric. Perhaps the Ultrasound Community felt the concerns of industry bearing down upon them.

It might be convenient to think that the Ultrasound Community overly influences the DUS dilemma; however, it is ethically concerned. It issues ALARA [as low as reasonably achievable] guidelines to reduce exposure, and advocates for operator safety training.

Unfortunately, those guidelines are often ignored, misunderstood or viewed as an inconvenience. The US Food and Drug Administration does not enforce guidelines, and guidelines can be difficult to implement due to the competitive business aspect of medical practice.

Dr Floyd Dunn was an Honorary Member of the Rochester Center for Biomedical Ultrasound (RCBU) at the University of Rochester Medical Center (URMC) in New York State. Other members include Dr Morton W.

Miller, Emeritus Professor in the Department of Obstetrics and Gynecology at URMC, and Dr Edwin L. Carstensen, who founded and directed the RCBU. Dr Jacques S. Abramowicz is a former Director of the Ob/Gyn unit at URMC. Dr Wesley L. Nyborg (d. 2011) was a Charter Member and a Visiting Scientist at the RCBU.

Industry supports these people, and their work supports industry. They may represent decades of subtle evolution under subconscious conflict of interest.

Nyborg chaired the AIUM Bioeffects Committee, which routinely issues safety threshold statements up to the present era. Figure 1 (below) shows the 1976 and 1987 AIUM statements, where 100 mW/cm² SPTA [spatial peak temporal average] is declared the upper safe intensity threshold. Nyborg had misgivings about the AIUM statements, as indicated by a comment in his 2003 article:

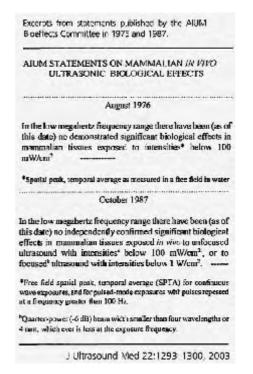


Figure 1: Excerpts from AIUM Bioeffects Committee statements, 1976 and 1987 (Source: Nyborg³⁹)

"For lung damage in small animals at frequencies of 2 to 3 MHz, the threshold [where the] duty factor is 0.001 [is] about 33 mW/cm². This is lower than the values for the SPTA intensity cited in the 1976 and 1987 statements and therefore *indicates that the latter may be invalid.*"⁶⁹ (Emphasis added.)

The AIUM statements are based on the results of many studies, but a substantial number of quality studies contradict the AIUM statements.

About the Author:

Jim West lives in New York City where he is involved in environmental research, politics and the arts. He served as Chairman of the Science Committee for the No Spray Coalition, which litigated extensively against the City of New York with regard to the helicopter pesticide spray programs.

He is a member of GreenSpeakers, a Toastmasters group. West is known for his published articles of independent research, finding environmental causation for polio, West Nile, SARS and H1N1 epidemics. In 2001, ABC News (USA) published some of West's environmental research in a detailed article about West Nile virus by producer-writer Nicholas Regush.

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Editor's Note:

This article is adapted with permission from Jim West from chapters 1 and 4 of his book *50 Human Studies,* In Utero, *Conducted in Modern China, Indicate Extreme Risk for Prenatal Ultrasound:* A *New Bibliography* (harvoa, 2015; see review in this issue).

The book includes citations for the Chinese Human Studies plus animal and cell studies. The endnote numbering from the book has been retained.

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Rising Autism Rates and The Link with Epigenetics

Autism rates are rising alarmingly and may be Jinked to a transgenerational response to environmental factors that switch off key genes affecting a specific chromosome. High plasma GABA levels, resulting in abnormal axonal development in the corpus callosum, are implicated in autism.

by Brett I. Cohen, PhD

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Autism is a complex genetic disorder that is characterised by significant disturbances in social, communicative and behavioural functioning.

An autistic subject can have disturbances that include serious impairment of social relationships, delayed or deviant language development and repetitive and/or ritualistic play and interests.

Onset of autism occurs before the age of three years, and the symptoms described above usually continue throughout the autistic person's lifetime. Pervasive developmental disorder (PDD) is defined by the presence of abnormal and impaired development that is observed before the age of three years old.

Autism affects males in the population more than females in a ratio of about 4:1 (Cohen, 2004). The diagnosis for autism is usually made through clinical observation using current DSM-5 criteria. To date, no cure has been found for autism.

Approximately 15 years ago, the rate or frequency of autism observed in the USA was one in 10,000 births and was considered fairly uncommon (Cohen, 1998).

Just over 10 years ago, Cohen (2004) reported that the rate of autistic disorder was one in 1,000 births in the USA, and when a broader definition was used (which included all PDDs) the prevalence of autism was one per 500 births.

In 2009, it was reported that the rate or frequency of autism has been steadily rising and was believed to be one in 150 births in the USA (Currenti, 2010).

In 2014, the Centers for Disease Control and Prevention estimated that the autism rate was one in 68 births in the USA (CDC, 2014).

Environmental Effects on Gene Expression

Researchers have been looking at environmental causes to try to explain the recent steady increase in the frequency of autism around the world.

So far, there has been no single underlying environmental issue that has been linked with autism to explain the alarming increase in the rate of autism.

An emerging theory involving genetics is *epigenetics*. It refers to changes in phenotype (appearance) or gene expression, believed to be caused by mechanisms other than changes in the underlying DNA sequence.

These changes may remain through cell divisions for the remainder of the cell's life and may also last for multiple generations. Epigenetics includes the genetic origins of behaviour and the direct, systematic influence that environmental forces have (over time) on gene expression.

Epigenetic changes, while not altering the DNA sequence, can alter which genes are expressed. Genes that might otherwise be activated could be silenced by epigenetic changes or vice versa. This could then impact an individual's risk for adverse health issues in life.

In two landmark articles (Kaati *et al.,* 2006; Pembrey *et al.,* 2007), the first evidence was cited that environmental effects can be inherited in humans.

They showed that a famine at critical times in the lives of grandparents can affect the life expectancy of their grandchildren.

At the heart of their theory is that genes have a "memory" and that the lives of grandparents (the air they breathed, the food they ate) can directly affect the health of future generations.

The health connections between grandfather/grandson and/or grandmother/granddaughter were most pronounced

two generations later.

For example, men who experienced famine at around age 10 had paternal grandsons who lived much longer than those whose grandfathers experienced plenty, while women who experienced famine while in the womb had paternal granddaughters who died on average far earlier. The authors called this effect a *transgenerational response*.

Here, in these studies, epigenetics adds a whole new layer of understanding to genes that is beyond DNA.

It proposes a control system of "switches" that turn genes on or off, and suggests that factors affecting people, such as nutrition and stress, can control these switches and cause inheritable effects in humans.

Therefore, epigenetics could be a useful tool in explaining the rising rate of autism around the world.

Environmental factors from past generations, such as nuclear bomb testing during World War II and the deployment of atomic bombs, could be likely candidates for epigenetic transgenerational adverse health changes.

In this article, it is postulated that a transgenerational response due to worldwide exposure to nuclear radiation from the mid-1940s could account for the observed rise in autism some 65 years later.

It is also postulated that this transgenerational response to nuclear radiation exposure will be more pronounced two or three generations later (similar to the studies by Kaati and Pembrey), which coincides with the reported data found today regarding rising rates of autism.

It is therefore hypothesised that the rate or frequency of autism will be reduced in future generations (for example, the fourth, fifth, etc.) due to a lessening transgenerational response.

Adverse Health Effects through the Generations

Some articles in the literature support this theory of transgenerational inheritable adverse health effects. Nomura (2006) illustrated that transgenerational responses are possible in mice.

Parental exposure of mice to radiation and chemicals resulted in a variety of adverse health effects (for example, tumours, congenital malformations and embryonic deaths) beyond the first post-radiation generation.

Nomura also explained that such transgenerational adverse health effects due to radiation exposure from the atomic bomb explosions over Hiroshima and Nagasaki in August 1945 are possible in humans.

In another study, Suskov *et al.* (2008) demonstrated transgenerational adverse health effects in children whose parents were irradiated (exposed to nuclear radiation) compared to children of the control group whose parents were not irradiated.

Nadeau (2009) showed transgenerational genetic health effects where genetic factors in one generation affect phenotypes in subsequent generations without inheritance of the genetic variant in the parents.

A Possible Cause of Autism

Cohen (1999) was the first researcher to illustrate extremely high gamma-aminobutyric acid (GABA) levels in the plasma and urine and high plasma ammonia levels as possibly the root cause of autism.

GABA is a major inhibitory neurotransmitter in the mammalian brain and responsible for axon(s)-to-oligodendrocyte signalling in the corpus callosum.

Located in the centre of the brain, the corpus callosum is responsible for language, intelligence and speech; when this area is damaged, cognitive disorders and language delays are usually found.

The finding of elevated levels of GABA in the urine and plasma could explain why autistic features such as selfstimulatory behaviour and language delays are found, and this is possibly due to the abnormal development of the axon(s) in the corpus callosum (Cohen, 1999, 2002, 2004).

Cohen (2002, 2004) proposed a possible link between the liver and infantile autism via the measurements of elevated plasma ammonia and lower gamma-aminobutyric acid-transaminase (GABA-T, EC 2.6.1.19) enzyme activity.

GABA-T is the enzyme responsible for GABA catabolism (chemical breakdown in the liver during regulation). Cohen (2002, 2004) showed that the GABA-T enzyme activity for an autistic child was approximately 45.5 per cent (approximately half) lower than for the average control group.

Elevated levels of ammonia in the plasma result in a decrease in the efficiency of the enzyme GABA-T, and this

results in higher GABA concentrations in the plasma after liver regulation.

In order to illustrate the importance of GABA-T enzyme activity and its relationship with plasma GABA levels in the brain, Cohen (2001) reported an experiment where GABA-T enzyme activity was inhibited with the use of 1-(n-decyl-)3-pyrazolidinone (BW 357U) (a potent, selective inhibitor of GABA-T enzyme activity *in vitro*) by oral administration to rat subjects.

This experiment resulted in an approximate 50 per cent reduction of GABA-T enzyme activity, and this corresponded to a threefold increase in plasma GABA levels in the brain.

Cohen (2001) also demonstrated that the GABA-T enzyme activity for an autistic subject (a nine-year-old white male diagnosed with infantile autism) was inhibited or inefficient by approximately 45.5 per cent (almost half), and this resulted in a measured plasma GABA level of approximately 2.25-fold more than the norm.

GABA-T enzyme activity for the control group (normal control) ranged from 110 to 147 pmol/min/mg of protein with an average of 128.5 pmol/min/mg of protein.

The value measured for the autistic child was 70 pmol/min/mg of protein, and this represents a value of 54.5 per cent GABA-T enzyme activity compared to 100 per cent for the control group.

Therefore, the GABA-T enzyme activity for the autistic subject was 45.5 per cent lower than for the control group (I[70 pmol/min/mg divided by 128.5 pmol/min/mg x 100] - 100I = 45.5 per cent).

Therefore, increasing the GABA-T enzyme activity for autistic patients could result in less plasma GABA (after liver regulation) entering the bloodstream and crossing the blood-brain barrier.

In other words, a GABA-T agonist can be used to activate GABA-T enzyme activity selectively, and this would result in a lower plasma GABA level in the brain.

In addition, Cohen (2002, 2004) postulated that a link (a cause and effect) between plasma ammonia and plasma GABA exists, where the concentration of plasma ammonia and plasma GABA is directly related to one another.

In fact, a ratio of approximately 0.3 (plasma ammonia to plasma GABA) seems to exist for normal subjects as well as for autistic subjects and individuals with liver disorders (e.g., hepatic encephalopathy) (Cohen, 2002, 2004).

Many researchers have observed high plasma GABA levels in autistic subjects. Dhossche *et al.* (2002) reported high or elevated levels of GABA in autistic subjects and suggested the hypothesis that GABAergic mechanisms may play a role in the aetiology or pathophysiology of autistic disorder.

Russo (2013) observed that the increase in GABA levels in autistic children resulted in increasing hyperactivity, impulsivity severity, tiptoeing severity, light sensitivity and tactile sensitivity.

He also suggested that plasma GABA levels are related to symptom severity in autistic children. These findings support the observation that high plasma GABA levels are found in autism.

A Treatment for Autism

In order to demonstrate that plasma GABA and plasma ammonia levels are crucial and important regarding autism, Cohen (2002a) described the use of a GABA-transaminase agonist, imipramine, for the treatment of autism.

Imipramine was chosen as the GABA-T agonist due to its long-term safety record as a drug suitable for a child (typically used for bedwetting and depression in lower doses, e.g., 25 to 75 mg daily).

In this case report by Cohen, an approximate one-third reduction of plasma GABA and plasma ammonia levels was observed for an autistic child being treated with a GABA-T agonist.

The patient's behaviour and social interaction were also monitored. A GABA-T agonist can be used to activate GABA-T enzyme activity selectively, and this can result in significant lowering of plasma GABA and ammonia in the brain.

A quantity of 100 mg of imipramine was administered orally to the autistic child for a one-week period and then 125 mg for six weeks.

Thereafter, the dosage was increased to 150 mg for 10 weeks. The maximum dosage administered was 150 mg over an approximate six-and-a-half-month period.

After six-and-a-half months of treatment, an approximate one-third reduction of plasma GABA and plasma ammonia levels was observed in this autistic patient and there were noticeable improvements in verbal/language skills.

Before treatment, Cohen had measured the plasma ammonia levels at 67.2 ymol/L, which is significantly higher than the normal range of 12 to 47 ymol/L.

After the six-and-a-half-month period of treatment, Cohen measured the plasma ammonia level at 48.7 ymol/L. This represents a 27.5 per cent reduction of plasma ammonia ($67.2 - 48.7 / 67.2 \times 100 = 27.5$ per cent).

It should be noted that the autistic child's combined total levels of imipramine and its chemical by-product desipramine were measured and found to be less than 50 yg/L (significantly lower than the therapeutic range).

The combined imipramine/desipramine concentrations are 125 to 250 yg/L in the therapeutic range, and greater than 500 yg/L in the toxic range (Cohen, 2002a).

A reduction of the plasma GABA (by administering a GABA-T agonist, imipramine) probably resulted in more axon(s)-to-oligodendrocyte signalling in the corpus callosum.

Cohen (2002a) observed that this also resulted in a significant reduction of autistic features including repetitious, ritualistic, self-stimulatory behaviour (stimming), an increase in the patient's social interactions and an improvement in verbal/language skills.

Additionally, Cohen (2002a) reported that the patient engaged in conversations that would not have been possible prior to initiating the treatment with the imipramine GABA-T agonist.

Epigenetic Switches

Cohen (2004a) illustrated that the unigene (as identified by the National Center for Biotechnology Information, NCBI) in *Homo sapiens* for the enzyme GABA-transaminase (GABA-T) implicates a mapping region of chromosome 16p 13.3.

Epigenetic transgenerational changes due to nuclear or atomic radiation exposure in paternal grandparents could be responsible for "switches" turning on or off the genes that affect chromosome 16p 13.3 in subsequent (especially two or three) generations.

This phenomenon could explain why elevated levels of plasma GABA are found in autistic subjects.

GABA-T enzyme deficiency (a decrease in efficiency of the enzyme GABA-T) results in less GABA liver regulation (catabolism of GABA) and therefore elevated plasma GABA levels being observed.

The finding of elevated levels of GABA in plasma could explain why autistic features are found. This is possibly due to the abnormal development of the axon(s) in the corpus callosum (Cohen, 1999, 2002, 2004).

About the Author:

Dr Brett I. Cohen holds a PhD in inorganic and bioinorganic chemistry from the State University of New York at Albany.

He received his PhD in November 1987 for his thesis entitled "Chemical Model Systems for Dioxygen-Activating Copper Proteins" and was a postdoctoral fellow at Rutgers University in 1988-1989.

His research at Rutgers was in the area of peptide synthesis utilising transition metal chemistry. After his postdoctoral fellowship, from 1989 to 2003. Dr Cohen was one of the owners of Essential Dental Systems (manufacturer of dental composites and dental materials) where he was Chief Executive Officer and Vice President of Dental Research.

Dr Cohen has been awarded 16 US patents and has had over 100 papers published in peer-reviewed journals (such as *Journal of the American Chemical Society, Inorganic Chemistry, Journal of Dental Research, Journal of Prosthetic Dentistry, Journal of Endodontics* and *Autism*, etc.).

These papers cover a variety of areas such as inorganic and bioinorganic chemistry, biomedicine, autism, physical chemistry, dentistry and more. Dr Cohen's article "The Great Pyramid of Giza and the Queen's Chamber Shafts: A Chemical Perspective" was published in NEXUS vol. 22, no. 5 (August-September 2015).

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Shadow of Nemesis

The Sphinx and The Great Pyramid

Part 1 of 2

Independent researchers in the 1980s to 1990s were stymied in their efforts to redate the Sphinx and investigate the Great Pyramid's shafts by antiquities chief Dr Zahi Hawass, who seems to have a long-term agenda for studying Egypt's Giza Plateau.

by Jack Heart and Orage

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TALES OF DR ZAHI HAWASS

It was R. A. Schwaller de Lubicz who first pointed out the water erosion on the Sphinx in the 1950s, but it wouldn't be until 1979 that John Anthony West would strike the first great media blow with *Serpent in the Sky*.

In 1980, Zecharia Sitchin quickly followed up with *The Stairway to Heaven*, and within a span of two years the temple of academic Egyptology had begun to topple.

A "New Age" cottage industry of ancient Egyptian speculation based on Sitchin's and West's books arose in its place. Typically, the 1960s-addled theorists pointed to the Sphinx's appearance of obvious greater antiquity compared to other Egyptian edifices.

Mustering its bottomless economic and political resources, the empire struck back. Strangely enough, operating on a grant from the Edgar Cayce Foundation, academic hatchet-man Dr K. Lal Gauri, Director of the Stone Conservation Laboratory at the University of Louisville, Kentucky, and Mark Lehner, Field Director for the American Research Center in Egypt (ARCE), undertook a geological survey of the Sphinx.

Lehner's preliminary results were published in an ARCE newsletter in 1980. In the same publication in 1981, Gauri maintained that the Sphinx's appearance of great age is the result of Giza's subterranean water table being wicked up to the surface, where under the influence of a capillary process it enters the pores of the Sphinx as a concentrated salt solution in the cool of the night.

At sunrise, as the temperature rises, the water evaporates and salt crystallisation occurs within the pores. The pressure produced by the crystallisation results in cracking and flaking off of the limestone surface. Based on this, Gauri concluded that the Sphinx was constructed no earlier than Egypt's Fourth Dynasty.²¹

In the aftermath of the geological survey, West suggested that for the sake of preserving "the accepted chronology of the evolution of human civilization", Gauri was ignoring his own evidence.

According to calculations made by Lehner and published with the survey, using the orthodox timeframe there was only a 500-year window in which the erosion could have taken place.

That left nowhere near enough time for salt damage to have caused the two-foot-deep vertical gullies seen on the Sphinx enclosures walls.

West went on to accuse Gauri of inventing a fictional process where, for 500 years during and after the reign of Khafre, water was magically pulled up to the Sphinx from 50 feet lower than its present subsurface level.

And again, by magic, it suddenly ceased over 4,000 years ago, even as the water table has continuously risen since then. 22

West, without a doctorate, was ignored publicly; but by 1986, Gauri had revised his wicking process in favour of the desert's evening dew.

He would clarify his salt "exfoliation" theory, embraced by academia to this day, by saying: "The source of this water is the atmosphere, and not the subsurface, because the water table lies many meters below the surfaces under consideration. Therefore, during the long burial of the Sphinx, the rock must have become wet to a considerable depth, and as it dried when exposed to the sun, the salts must have become concentrated in the

surface layers."23

Exasperated, in 1989 John Anthony West introduced Dr Robert M. Schoch to the fray.

Dr Schoch's Analysis

Dr Robert Schoch, a Yale-educated geologist with an impressive list of credentials, made his first scientific expedition to the Giza Plateau in 1990. Over the next 10 years, he would make several more. [See Dr Schoch's 1999-2000 paper at http://tinyurl.com/pssigul]

Schoch found no other reason to believe that the undulating vertical profile seen on the Sphinx and the walls of its enclosure—prominent vertical crevices that follow joints and faults in the bedrock as well as cross-cutting diffusion fronts, all telltale signs of water runoff—are anything other than just what they appear to be: water runoff.

Since the erosion also occurs on the back of the Sphinx, the water runoff would have to have been caused by rainfall.

The most recent, sustained rainfall on the Giza Plateau where that kind of erosion could have occurred was during the Nabtian Pluvial, a period of relatively heavy precipitation that occurred in Egypt from about 10,000 BCE to 3000 BCE.

In the spring of 1991, with permission from the Egyptian Antiquities Organisation, Dr Schoch and Dr Thomas L. Dobecki, a seismologist, took low-energy seismic refraction readings of the Sphinx enclosure's floor. They were determining subsurface water penetration.

According to Gauri's own classification system for the various hardness levels in the strata of the limestone, the entire floor of the enclosure is the same hardness level, called the Rosetau Member or Member I.

Yet Schoch and Dobecki's seismic refraction readings showed water penetrating into the floor of the enclosure at a depth of six to eight feet around the head and sides of the Sphinx and only four feet around the rump on the western side of its enclosure.

The southern wall of the enclosure runs in a straight line along the causeway, but where it abuts the western wall there is another tier about 11.5 feet up from the floor of the enclosure.

Schoch admitted that they ran the line for their readings close to the lower wall and says he would like to take more readings closer to the rear of the Sphinx. But according to the data they collected, the rear portion of the Sphinx must have been carved much later than the front portion.

Water penetration rate is nonlinear; the deeper the penetration into the rock, the greater the insulation from the exterior of the rock.

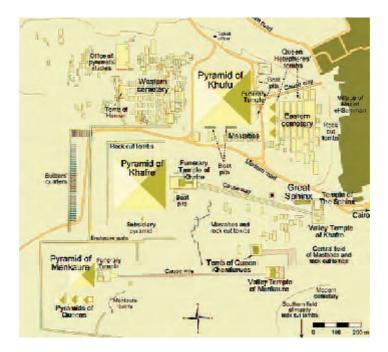
Accordingly, Schoch speculated that during renovations by Khafre in 2500 BCE, the narrow western end of the enclosure was widened or the lower rump of the Sphinx was carved from the bedrock which had been left intact to serve as a pedestal for the original statue.

Schoch calculated by the extra water penetration in front that, if Khafre was responsible for the renovations to its rear, the original Sphinx was at the very least 7,000 years old, perhaps much older.

Schoch noted that the vast majority of the weathering and erosion occurred to the Sphinx prior to 1400 BCE when repairs were made during the New Kingdom.

He chided Lehner for his willingness to ignore his own data, quoting him thus [Lehner, 1980, p. 18]: "To seek agreement with known historical facts...we should probably expect the earliest restoration to have been done in the New Kingdom.¹

Schoch scoffed at the notion that the three to over six feet of erosion exhibited by the enclosure walls within the 900-year span between Khafre's alleged construction of the Sphinx and the New Kingdom, the monument buried in sand for half that time, could be due to migrating salts.



Map of the Giza pyramids complex (Image created by MesserWoland, available at Wikimedia Commons)

He pointed out that structures on the Giza Plateau immediately to the south of the Sphinx, carved from the same limestone and at the same elevation or lower, do not exhibit the extreme weathering patterns that the Sphinx does.

Nor do they exhibit any sign of Gauri's "capillary weathering". Schoch maintained that weathering from salt exfoliation can be seen in various structures carved into the bedrock at Giza, particularly on tombs directly north of the Sphinx.

He said that it leaves the unmistakable "appearance of slightly melted wax, at times covered with a very fine coat of mineral crystals".

He called "the dissolution and recrystallization of calcite" and the "efflorescing of dissolved and recrystallized minerals" the "most minor component of weathering observed on the Giza Plateau".

Schoch surmised that they were only recently made relevant by the construction of the Aswan Dam. The dam prevents the natural ebb and flow of the Nile from flushing the rocks clean of salt, drastically accelerating its corrosive effects.

Added to the detrimental effects of the dam are the rapid industrialisation of Cairo, air pollution, acid rain, rising water tables due to encroaching settlement, tourism, and automobile and bus traffic, all making it impossible to extrapolate the present rate of the Sphinx's deterioration into the past.

Schoch pointed out that "Gauri has documented the modern deterioration, as opposed to ancient weathering, of the Sphinx".

He cited Gauri's 1981 publication that illustrated, using comparative photographs from 1925-26 and 1980-81, just how rapid the deterioration of the Sphinx has been over the last few decades.²⁴

The Sphinx Temple, and possibly the core of the Valley Temple, were constructed with the same titanic limestone blocks that were quarried from the Sphinx enclosure.

Later, perhaps thousands of years later, the temples were encased in Aswan granite which can be dated by inscriptions on it to at least the Fourth Dynasty.

Based on his observations of both the limestone and the granite blocks still left on the site, Schoch postulated that the Valley Temple was partially reconstructed in dynastic times.

He noted that the limestone core of the temples exhibits the same telltale signs of precipitation-induced weathering as the Sphinx and its enclosure.

He also noted that the backs of the granite casing stones were cut in an undulating pattern mimicking the weathered limestone in order to fit flush against it.

He concluded that the weathering on the limestone was already there for a long time before the limestone was covered with granite, the implication being that the original Sphinx temples are of predynastic origins—just like the Sphinx itself.²⁵

In 1993, perhaps trying to atone for all the damage he had done with his Hollywood hero portrayal of the legendary Old Testament thug, Moses, Charlton Heston narrated a documentary titled *Mystery of the Sphinx*.

The Emmy Award-winning film aired on NBC television to massive audiences. It highlighted some of the discrepancies that Egyptology has with hard science.

As the Chief Inspector of the Giza Pyramid Plateau, Dr Zahi Hawass, would later remark: "If geologists prove what Schoch is saying, still in my opinion, as an Egyptologist, the date of the Sphinx is clear to us."²⁶

Hawass had already assumed his dictatorial powers over Giza when in March of that very same year he was relieved of his title by the President of the Egyptian Antiquities Organisation (EAO), Dr Muhammad Bakr, ostensibly Hawass's boss.

A priceless statue had disappeared while in the custody of Hawass. No worries, though: Bakr would be fired in June under allegations against him of malpractice and fraud. He muttered to anyone listening about a "mafia" which had controlled the Giza Plateau for "the last twenty years".

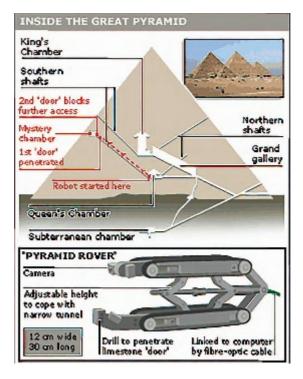
Probably wisely, Bakr refused to give names. He maintained: "I wanted the whole matter investigated by the prosecution authorities, but my request was refused."²⁷

By early 1994, Hawass would have both his title and his power back. The EAO would be revamped into the SupremeCouncil of Antiquities (SCA) and henceforth, according to Wikipedia: "Foreign archaeologists working in Egypt were required to report all discoveries and finds to the SCA before publication."

That now had to be very clear because in the vacuum created by the temporary removal of Hawass, German engineer Rudolf Gantenbrink had committed the ultimate blasphemy by bypassing Egyptology's bureaucracy and going directly to the public with his discovery.

Gantenbrink and the Great Pyramid Shafts

In 1991, Rudolf Gantenbrink, one of those engineering prodigies that Germany seems to produce on an assembly line, agreed to embark on a joint venture to explore the shafts of the Great Pyramid with Dr Rainer Stadelmann, Director of the German Archaeological Institute Cairo (DAI Kairo). Gantenbrink would construct robots specifically for that purpose.



News.BBC.co.uk, http://tinyurl.com/qxlw9wp

There are four narrow shafts found in no other pyramids but the Great Pyramid. Two, discussed in literature since the early 17th century, extend upwards from the King's Chamber and exit the pyramid on the southern and northern sides.

The southern shaft rises at an angle of about 45 degrees, is about 175 feet long and narrows to eight inches wide and 12 inches high for most of that way. The northern shaft meanders up at an angle of about 31 degrees, is 235 feet long, seven inches wide and five inches high.²⁸

The shafts in the Queen's Chamber, located below and slightly to the north of the King's Chamber, were walled up since time out of mind.

They were only discovered in 1872 when a crack was noticed in the southern wall by British engineer Waynman Dixon and Dr James Grant, known in Egypt as Grant Bey. The title of "Bey" was the Khedive's equivalent to a knighthood.

Grant Bey was the son of a Scottish banker and a close personal friend of Sir William Matthew Flinders Petrie. Grant and Dixon were checking on some measurements in the Great Pyramid at the behest of the brilliant Scottish astronomer Charles Piazzi Smyth.

Smyth was most famous for his theory that the Great Pyramid was built by the Israelites, who were in reality the Hyksos, on the instruction of God through Melchizedek.

Both Smyth and Petrie were prominent academic proponents of British Israelism—a belief that the British are the lineal descendants of the Israelites and that the throne of Great Britain can be traced back to the House of David.

According to the account given by Smyth, a void was detected when a wire was pushed through the crack to what he called an "unconscionable depth".

When a hole was chiselled out of the crack, an eight by eight-and-a-half inch channel was revealed. It led seven feet straight into the pyramid, before inclining at an average angle of a little less than 40 degrees upwards into the unknown.

Aware of the two shafts in the King's Chamber, Dixon calculated the corresponding position on the northern wall of the Queen's Chamber where the other shaft might be.

After a minimal amount of chiselling, he found it. Fires were lit inside the shafts to see where the smoke went. It stagnated in the northern shaft, but it disappeared into the southern shaft.

No smoke was observed outside the pyramid. A granite sphere, a chunk of wood and a piece of copper referred to as a "grappling hook" by academia were recovered from the shafts, but no one specified which shaft.

The artefacts were brought back to England and given to Smyth by John Dixon, Waynman's brother.

They were dutifully described by Smyth in his diaries and then they promptly disappeared until 1993 when Robert Bauval, with the help of Dr Mary Bruck, traced them to the British Museum depository—minus, of course, the chunk of wood which could be carbon dated.

Soon after its discovery, the wood was described in the British press and in the journal *Nature* by Henry William Chisholm, Great Britain's Warden of the Standards:

"The fragment of the cedar rod is 5 inches in length, with rectangular section of 0.5 inch by 0.4 inch. Its sides are not accurately planed, and they bear parallel lines like file marks. It may possibly have formed part of a measure length."²⁹

In his first attempt in March 1992, Gantenbrink found that his camera-equipped robot could not pass through any of the four shafts due to various glitches.

He did, however, manage to get the robot almost 40 feet into the shafts of the Queen's Chamber, disproving the academic assertion that those shafts are just a few feet long and acted only symbolically as escape routes for "the pharaoh's soul".

The other three shafts would eventually yield their secrets to late-20th-century technology, but the northern shaft of the Queen's Chamber veers westwards at a 45-degree angle that would prove to be too sharp for any of Gantenbrink's robots to negotiate.

The robot camera did, however, reveal the threaded end of an hexagonal iron rod that is jammed into the bend. The rod can only be part of the tool that Dixon used to pry loose the artefacts now in the British Museum. A second attempt was made in May 1992 with a new robot. While Hawass reluctantly closed the pyramid for a week, losing tourism revenue, the Germans installed a ventilation system.

Work on the outlet of the northern shaft of the King's Chamber was performed at over 250 feet directly above the main entrance to the pyramid.

With the installation completed and running at 30 per cent capacity, the system reduced the humidity inside the pyramid to the same as that outside of it, a huge benefit for the preservation of the iconic edifice.

Later in the same expedition, Gantenbrink finally managed to push a robotic camera through the shafts in the King's Chamber, producing a video recording of the interior and allowing humanity to see a cross-sectional view of the Great Pyramid for the first time in recorded history.

Before his victorious departure from Egypt, a scheduled last-day press conference where Gantenbrink could take a bow for his achievements was cancelled without explanation.

Gantenbrink's third attempt to find the destination of the shafts in the Queen's Chamber took place in March 1993 with the less-than-enthusiastic support of DAI Kairo and Stadelmann.

The DAI had none of the paperwork ready, and Stadelmann dropped by the operation only once. He eventually pulled the DAI's photogrammetrist Ulrich Kapp from the expedition. Gantenbrink referred to Kapp as his "most important companion on all three campaigns".

Gantenbrink was treated no better by the Egyptians. Hawass, in spite of all that Gantenbrink had accomplished for both science and Egypt, warned the engineer that his paperwork was not in order before allowing him to proceed. On 20 March 1993, Hawass "resigned".

On 22 March, after he had improvised numerous engineering adjustments to his newest robot on site, Gantenbrink found that the robot's path was blocked by an ornate slab of limestone, 188 feet into the southern shaft of the Queen's Chamber.

The slab had two corroded copper fittings side by side, as if once providing some kind of handle for a tiny door.

As the camera panned in on what looked to be a round white chalk mark over each of the completely rusted fittings, Gantenbrink described the Inspector for the EAO as turning chalk-white himself and shouting: "These are seals, these are seals!"

The Inspector then exclaimed, visibly shaken: "We must stop work immediately and inform our chairman".³⁰

Work was halted. Over the next few days, Stadelmann haggled with Gantenbrink over what would be said in the press release.

Stadelmann finally insisted that there should be no press release, at least until May and probably not till the next expedition. Disgusted, Gantenbrink resigned from his "joint project" with the GAI and went back to Germany.³¹

In April, news of his discovery was leaked to the British press. Gantenbrink was banned from the Giza Plateau by the EAO and was publicly denounced.

Gantenbrink would never again be allowed in the Great Pyramid, and even his offer to train technicians and let them use his robots was rejected by the Egyptians, who maintained that his discovery was nothing.

Dr Bakr actually called it a "hoax", saying: "The orifice of the shaft is too small for the robot to go through." After redefining the nature of the orifice and shaft for Bakr, the resurrected Hawass said: "I do not think this is a *door,* and there is nothing behind it."

By 1996, Hawass would be shamelessly promoting a "mission" by the Amtex Corporation of Canada to open "the door".

While soliciting the US\$10 million necessary for the venture, Amtex president Peter Zuuring was telling investors that he was working with "a personal friend of Hawass".

Zuuring was telling people: "Whatever the event we are going to stage, it will be televised live".³²

Lost in the hoopla over the door are the pictures that Gantenbrink's robot took of what looks to be a builders line painted in the space where blocks 16 and 17 of the lower southern shaft are slightly offset.

Block 26 of the same shaft shows a cutting groove, and blocks 8 and 9 were set unfinished. Other engineering mistakes in the pyramid's construction show up in the cross-sectional views provided from inside the shafts.

There can no longer be any question that the Great Pyramid was built by corporeal and fallible entities. Only what entities, why and when?

In all likelihood, Gantenbrink found the answer to the last question in the lower northern shaft, and it was the real reason that he became anathema in Egypt.

There is another rod at the bend of the northern shaft in the Queen's Chamber. It is underneath the northern end of Dixon's hexagonal iron rod. Its fractured end extends out from the inaccessible part of the shaft.

When Gantenbrink tried to push his robot around the sharp turn, he couldn't, but he did get pictures of the unidentified rod extending well into the shaft where the robots couldn't go.

In those pictures, there appears to be a blurry image at the far end of the unidentified rod. In Gantenbrink's words:

"At its end there is what seems to be a rectangular structure. Unfortunately, it is so far from the camera that, at this resolution, no further details can be clearly perceived."

But the pictures he took of the other end were much better. In clear resolution, Gantenbrink captured on film what appears to be a "cedar rod" with a height and width of about "0.5 inch by 0.4 inch", as recorded by Chisholm, protruding from the bend in the shaft.

Its end is clearly fractured, no doubt broken off by Dixon, who mentioned in his notes: "Bit of wood, broken off from a larger part, measuring 5 inches, nearby, + accidental (sic] fractured end..." He also noted that the grappling hook was "[o]nce riveted on to a wooden handle".³³

Dixon recovered the artefacts by poking at the shaft with his sectioned hexagonal iron rod. He didn't say so outright because, although looting Egypt was still encouraged and supported, by 1872 it would have been jolly bad form to boast about it.

Posterity now only knows for sure because Dixon and his team jammed their no doubt 1872 secret state-of-the-art technology in the form of a custom-made iron rod into the bend and couldn't get it out.

Perhaps it was the curse of the pharaohs that was just a little too strong for the empire's magic tricks.

The wood and the grappling hook were broken off from an ancient wooden rod that should still be in the shaft, waiting to be carbon dated. In the lower northern shaft of the Great Pyramid lay the long-sought answer to exactly when it was built.

But just as with the actual date of the Sphinx's construction, Hawass was having none of it. Egyptology was having none of it. The empire was not amused.

In 1998, Hawass was given a new title, Director of the Giza Plateau. The now modified and improved "Director" would close down the Great Pyramid in April.

According to Hawass, the humidity levels in it were still too high, and a new ventilation system, which would be donated this time by a French company, was required.

Other reasons given for closing the pyramid were to remove graffiti left inside by visitors, clean the salt residue left from human perspiration, clean the walls of the first and second chamber and repair cracks in the walls of the Great (Grand] Gallery.³⁴



The hieroglyph for "Kh" as it is shown in Colonel Vyse's notes. (Source: http://rickrichards.com/ Egypt.htm)



The hieroglyph for "Kh" as it is now in Campbell's Chamber. (Source: http://rickrichards.com/ Egypt.htm)

Many think that Hawass may have interpreted his mission statement to clean up the graffiti too broadly.

It seems that Colonel Richard William Howard Vyse never really did get it right, at least in his notes.

For his hieroglyphic representation of the "Kh" in Khufu's cartouche, Vyse has a circle around a badly smudged ink blotch when it should be a circle around three crossbars [see image left].

In Campbell's Chamber, it's now indeed three crossbars, but the lumpy horizontal lines look like they may have been doctored with a chisel and paint brush out of something similar to the ink blotch in Vyse's notes.

They certainly aren't the three clean horizontal lines that Hawass reputedly shows in his depiction of Khufu's cartouche on his website.³⁵

Hawass's Knockoff Robots

In 2002, Hawass was appointed Secretary General of the SCA. By the end of the year he would finally be ready to stage the media event that he and his business partners had been promising the world since 1996.

The National Geographic Channel (Nat Geo) would supply the robot, basically a knockoff of Gantenbrink's with the addition of impact-echo analysis capabilities to see how thick the "door" is, a drill to go through it and an extendable fibre-optic camera to look inside. Nat Geo and FOX would supply the airwaves.

As over a billion people, half a billion in China alone, watched breathlessly, Hawass discovered that seven inches behind Gantenbrink's door there is another blocking stone.

It's almost a shame that Porky Pig isn't under contract to Nat Geo. He could have burst on to the television screen through the image of the blocking door and ended for Hawass by saying, "Th-th-th-th-th-th-th-th-th.

But Hawass was only done for the cameras. A few days later, away from the world's prying eyes, Hawass somehow managed to push a robot past Dixon's rod and the angle that had stopped Gantenbrink's robot in the lower northern shaft.

After negotiating two more sharp angles where the builders manoeuvred the shaft around the Grand Gallery, at a little over 88 feet in, Hawass's robot found its way blocked by two more metal rods.

The rods look to be the same type as the one that was presumably used by Dixon and that stuck in the first bend of the shaft.

Hawass also claimed to have discovered a plain paper wrapper and a ticket to see the pyramids and Sphinx at 60 and 68 feet into the shaft.

How those rods or any of the other objects got to where Hawass claimed to have found them may be a greater mystery than even how the Pyramid was built.

At 206 feet in, the intrepid Hawass and his suddenly unstoppable knockoff robot were finally halted for good.

They had come to another blocking stone that was a replica of the one that Gantenbrink had found a decade earlier in the lower southern chamber.³⁶

Eventually, Hawass would deploy a more technically advanced robot, designed by Hong Kong dentist Ng "TC" Tzechuen, a man nobody had ever heard of.

When the pictures taken by the new robot of the approximately eight-inch-square compartment between the two blocking stones were assembled, they showed a builder's line resembling the one photographed by Gantenbrink between blocks 16 and 17 further back in the shaft.

This one's painted on the floor to the right of the hole drilled by the knockoff. On the floor above the line, between it and the right wall of the compartment, are three tiny paint smudges, each about a half-inch square.

Some Egyptologists have claimed, naturally, that they are the numbers for 121 cubits, the overall length of the shaft, written in hieratic script of course.³⁷

Hawass did have plans to drill through the door in the lower northern shaft, and possibly to stage another international TV extravaganza, but he was interrupted by Egypt's January 2011 revolution which put an end to his antics, hopefully for good.

Getting a piece of that wooden rod for carbon dating is the patent priority of any sane, if not even competent, scientist.

Hawass used a flimsy excuse to ignore it, saying: "Some suggest that carbon dating the wood would allow accurate dating of the Pyramid because wood must have been left in the shaft when the Pyramid was constructed (given that the shaft was sealed), but I contend that this is not absolute. Wood may [have] been placed in the shaft after construction via the shaft's exit, if one exists."³⁸

Outside of what should be obvious to even the most stupefied Hawass sycophant, if the wood is carbon dated to be older than the Fourth Dynasty, then the entire pseudoscience of Egyptology is invalidated.

There is also the inconvenient fact that there is no exit. If there is an exit, only the builders have ever seen it, least ways if we are to believe Zahi Hawass.

Continued next issue...

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To see part 1 of Jack Heart's article, "Shadow of Nemesis: Pyramids of Giza and Lies of Empire", posted at VeteransToday.com on 3 August 2015, go to http://tinyurl.com/oxymdvm.

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Sacred Solids in the Atomic Nucleus

Part 1 of 2

The periodic table of the elements can be reorganised into a tetrahedral structure, but it's unclear if electrons can fit into such a pattern. However, a geometric model utilising the Platonic solids suggests how protons in the atomic nucleus may be arranged.

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...our picture of the nucleus is so far different from the accepted picture (actually, there is no accepted picture) as to make any comparison impossible. The trained specialist recognizes immediately that if we are right, the whole edifice of 20th Century atomic physics must be rethought, as Dr Moon had done. Moon was able to make breakthroughs where others could not, in part because he had a hands-on mastery of the crucial experiments on which the theoretical structure was built. He had done the experiments. Few of his peers had the combination of competence and courage to think in the same way.

- Laurence Hecht¹

Introduction

This article describes a tiny portion of the research conducted by the eminent nuclear physicist Dr Robert J. Moon (191 1-1989)², and it also introduces some possible variants of it.

I came across Dr Moon's geometrical model of the atomic nucleus after having known of a nice reorganisation of the periodic table of the elements into a tetrahedral structure, the so-called Perfect Periodic Table.³

That made me ask the question: if the atomic elements can be organised in such a way, could the electrons themselves be geometrically organised in a regular way inside the atom? I am certain that there is a positive answer to this question, one that will arrive with us in due course.

What does exist, and nobody usually tells you about it at school, is a nice, coherent, geometrical model of the arrangement of protons in the atomic nucleus, which involves the Platonic solids.

Up to where modern science knows, every atom of matter is made of positively charged particles—protons—and neutral particles—neutrons— which are known to be concentrated in the atomic nucleus, and of negatively charged particles—electrons—which are located around it.

It is my firm belief that all those particles work together as an ensemble, but current physics separates the study of the nucleus from that of the extranuclear space.

At present, there is no theoretical model capable of describing in detail the structure of the nucleus. Each of the available nuclear models describes some of the known experimental observations, but there is no definite model that explains them all.

Dr Moon's nuclear model accounts for some of the periodicities found in many properties of the atomic elements, and it also explains why some elements—like uranium—may participate in nuclear fission.

In the course of my investigations, I rediscovered some alternative interpretations of two widely accepted physical theories: electromagnetism and quantum mechanics.

I was surprised to find that well before James Clerk Maxwell published his famous treatise on electromagnetism the one which all electrical engineers are taught—Alfred Weber had already proposed a general expression of the electrodynamic force between moving charged particles.

In fact, Maxwell's equations for the electromagnetic field can all be derived from Weber's electrodynamics.⁴ The interesting point for the present discussion is that Weber's theory predicts a distance below which the force between two charged particles of equal sign changes from repulsion to attraction.⁵

When the modern constants are substituted into his formula, one obtains the classical electron radius, despite the

fact that Weber developed his theory long before the discovery of the atom! Therefore, according to Weber's theory, positively charged protons inside the nucleus, instead of repelling, attract one another.

And why bother about quantum mechanics? Its widely accepted interpretation holds that one can only work with probabilities of finding an atomic particle in a given position inside the atom, and that it does not make sense to talk about the exact position or the trajectory of, say, an electron.

Not to mention the possibility that the electron or the proton have an internal structure! Fortunately, a solid alternative interpretation exists, according to which posing those kinds of questions is no longer utter madness.

As it involves Weber electrodynamics, it is likely to be unknown to most physicists. I am talking about de Broglie-Bohm quantum potential.

Dr Moon himself mentioned in one of his interviews⁶ that Louis de Broglie and David Bohm had worked together on the quantum potential interpretation of the Schrodinger equation—also known as pilot wave theory—until de Broglie's death.

This interpretation of quantum mechanics, presented by Louis de Broglie at the 1927 Solvay Conference⁷, not only predicts exactly all the experimental findings as it does the conventional approach (and some others which it does not explain such as the two-slit electron interference experiment or the Aharonov-Bohm effect) but it also shows that the probabilistic interpretation of quantum mechanics is a side consequence—not a necessary premise—and that it makes sense to talk about the trajectories and positions of atomic particles!

On the Structure of Matter

Figure 1 shows the modern periodic table of the elements. Each element is characterised by its atomic number, A, which counts the number of protons (positively charged particles) in its nucleus.

This number also indicates the number of electrons (negatively charged particles) that surround the nucleus when the element is in its stable, non-ionised state. Each element is also characterised by its mass number, Z, which takes into account the number, N, of neutrons (neutral particles) in the nucleus. Therefore, Z = A + N.

Depending on the number of neutrons in their nucleus, some elements have different variants known as isotopes, with the same atomic number but different mass number.

Some isotopes are non-stable and rapidly disintegrate. Among the stable isotopes of a given element, the periodic table depicts the atomic mass of the most abundant isotope in Nature. The mass number can be generally obtained by rounding the atomic mass to the nearest integer.

The highlighted elements in the table will be discussed in the next section.

What can be said about the internal structure of any of those particles?

For example, what is an electron?

Most physicists agree that it is an entity with the property of a quantum of charge, and that we cannot infer anything about its internal composition from experiments: we are only allowed to talk about the probability of finding an electron somewhere around the nucleus.

Fortunately, as mentioned in the introduction, according to the alternative interpretation of quantum mechanics originally suggested by Louis de Broglie in 1927, it does make sense to think of quantum particles as entities with internal structure that can move in some determined— although unknown—trajectories.⁸

As to the internal composition of an electron, according to the research conducted by biophysicist Dr Paulo Correa and his wife, Alexandra Correa, it consists of a quantum of circularised energy in a constant flow that defines a toroidal structure.⁹

Dr Vladimir B. Ginzburg has also developed a simple model of all elementary charged particles in the form of a torus of varying aspect ratio.¹⁰

And what do we know about the internal composition of a proton or a neutron? Physicists don't have a way of looking inside any such particle, but from experiments in particle colliders they agree that a proton (or a neutron) is composed of three more elementary units called quarks.

So, in the domain of nuclear physics it appears to make sense to talk about the structure of a particle (ha ha ha!). In fact, some experiments conducted at the Weizmann Institute of Science have shown that electric current is quantised in units of one-third of the quantum of charge.¹¹

So it is likely that the electron is also composed of some elementary units, but at the moment science does not

know this for certain. . .yet.

I suspect that both the proton and the electron have a common internal structure, and that they only differ in size and in their internal property of charge.

They could well be scaled versions of one another. In fact, physicists hold that beta particles are electrons emitted by the nucleus in the decay process of a neutron in a radioactive element.

Similarly, a neutron can be seen as a proton that has "fused" with an electron. But of course, in both cases, the size of such a nuclear electron must be comparable to that of a proton.

Therefore, everything seems to point out that electrons in the nucleus are scaled versions of their corresponding extranuclear partners! But let's focus on the main topic of the article.

Some Properties of the Atomic Elements

The electrons in the atom are known to be organised in shells, although very little is known about the actual geometric structure of those shells.

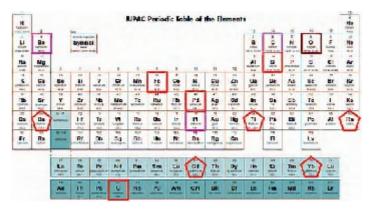


Figure 1: Periodic Table of the Elements. The elements marked with red squares, either dark or light red, mark the completion of a shell in the first set of four shells in the Moon model of the nucleus. Magenta squares mark the elements which I propose might indicate the closure of additional shells not originally considered by Moon. The elements marked with pentagons mark the completion of each shell in the twin dodecahedral structure of the Moon nuclear model. (Image source: http://www.iupac.org)

The noble gases, which are located at the rightmost column in the periodic table (figure 1 above), mark the completion of a shell. The leftmost element in the next row marks the beginning of a new shell.

Several properties, such as the atomic volume, the melting point, the coefficient of linear expansion or the compressibility factor, have a sharp maximum for the atomic number corresponding to the element that starts a new electron shell ($_{3}$ Li, $_{n}$ Na, $_{19}$ K, $_{37}$ Rb, $_{55}$ Cs). This is graphically shown in figure(s) 2 (below).

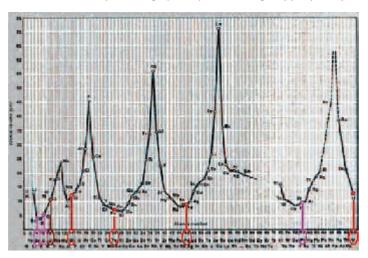


Figure 2 (a): Dependence of atomic volume on atomic number.

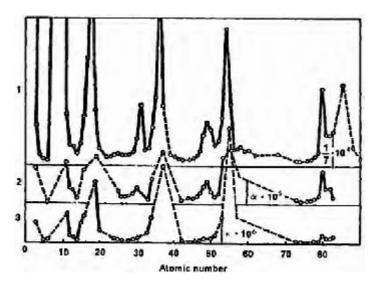


Figure 2 (b): Dependence on atomic number of (1) the quantity 1/T-104, where T is the melting point; (2) coefficient of linear expansion alpha-10s; and (3) compressibility factor K-\06. (Source for Figures 2 (a&b): Adapted from The Great Soviet Encyclopedia, http://tinyurl.com/kvdc7ah)

However, there are some other remarkable points in those graphs, namely their minimum points. Dr Moon proposed that protons are also organised in shells in the nucleus.

As I will show in the following sections, the completion of each of his proposed proton shells nearly corresponds to the atomic elements located at a local minimum of the above properties ($_{4}Be$, $_{6}C$, $_{8}O$, $_{14}Si$, 26Fe, $_{46}Pd$, $_{92}U$).

I have added two elements at the beginning of the series, beryllium and carbon, which were not originally proposed by Moon but which also correspond to local minima and could easily fit into his model, as I will explain later on.

The Tetrahedral Helix

Before going into detail, let me introduce an analogy that may help us to understand the rationale behind Moon's model.



Figure 3a



Figure 3b

Let's take any game with balls and equally sized rods that can be connected together to form polyhedra. We start with a triangle (figure 3a), and at each step we add a new pack of one ball and three rods (figure 3b).

We can imagine this pack as being a (nuclear) particle that joins a set of already established and organised nuclear particles. The triangle contains three balls and three rods.



Figure 3c



Figure 3d

After adding the first pack, we have four balls and six rods. Are those numbers familiar to you—namely, four vertices and six equally sized edges?

Of course, they can only be organised in three dimensions in the form of a tetrahedron (figure 3c)! In addition, it is the most symmetrical way of organising four elements in three-dimensional space, leaving an empty space in the centre.

I suggest that the four protons of the beryllium ($_4Be$) nucleus may be organised in such a way. Notice that this element is located near a local minimum of the atomic properties shown in figure 2.

Let's add a new "particle" (a pack of one ball and three rods). We can put it on top of any of the faces of the original tetrahedron, and we end up with two tetrahedra side by side (figure 3d).

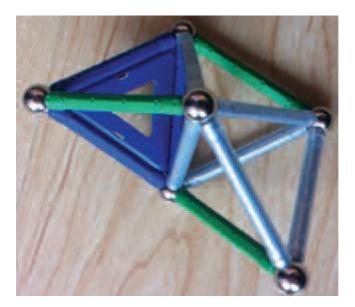


Figure 3e



Figure 3f

When we add a third additional pack, again we can put it on top of any of the six external tetrahedral faces, ending up with a three-tetrahedra bundle shown in figure 3e.

This completes what we will call a "turn" (because one green rod comes out from every ball in the original triangle, starting to define a twist direction).

An interesting fact about this set of six balls and 12 equally sized rods is that it can be reorganised in a very symmetrical way. Do you guess which one? Yes, it is our familiar octahedron (figure 3f)!

You may be wondering: is there any benefit in this reorganisation? Thinking in terms of volume, and supposing that each tetrahedron has one unit of volume, the original bundle has a volume of three, whereas the resulting

octahedron has a much larger volume of four.

We have reached a new structure which, using the same amount of building "material", has the highest symmetry and the largest inner volume possible.

Therefore, from this point of view—maximising volume and symmetry— it is an optimum structure. The final structure also achieves the closest packing of the six elements: a hypothetical circumscribing sphere would have minimum radius in the octahedral, centrally symmetrical structure than in the three-tetrahedra extended one.

I suggest that Nature uses this kind of optimisation to organise particles in the atom, and in particular protons in the atomic nucleus. If we look at the periodic table in figure 1, this octahedral organisation of six protons could correspond to the nucleus of carbon ($_6$ C), which, like beryllium, is also near a local minimum of the atomic properties of figure 2.

In order to continue adding packs to our structure, now we have two options: start either from the original threetetrahedra bundle or from the reorganised octahedron.

In the first case, each new tetrahedron can be added in a way that continues the twisting direction of what we call the "first turn".



Figure 4a shows the resulting tetrahedral helix after adding seven packs to the original triangle, and one of its possible symmetrical reorganisations.

Had we started from the reorganised octahedron, we could have stellated it, adding a tetrahedron to each of its faces.

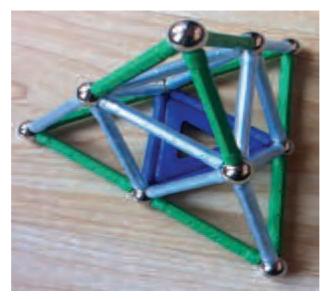


Figure 4(b): This can be reorganised as a three-dimensional tetractys.

After four such steps, the most symmetrical final structure appears to be a three-dimensional tetractys (figure 4b), or what Buckminster Fuller called a two-frequency tetrahedron.¹²

In addition to being symmetrical, this structure has a volume of eight units instead of the seven units of the 10-ball, seven-tetrahedra helix shown in figure 4a (the same amount of "material" can be organised in less symmetrical ways, which reach higher volumes).

Two more tetrahedra would complete a three-turn helix (nine tetrahedra), which happens to contain a total of 12 balls and 30 rods.

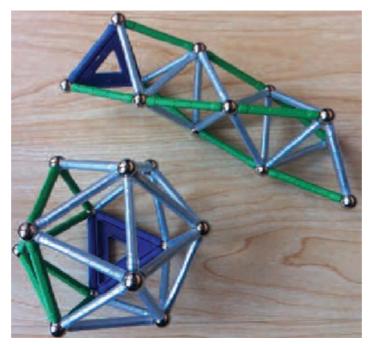


Figure 5: A three-turn tetrahedral helix contains exactly 12 balls and 30 rods, so it can be optimally organised in the form of a perfectly symmetrical icosahedron, which has maximum internal volume.

You may have guessed that these materials allow us to build an icosahedron, which would have the maximum volume of 18.51 units instead of the nine units of the original nine-tetrahedra helix (figure 5 above).

Continuing this process, we would eventually end up with a final 33-tetrahedra helix.

The reader interested in an alternative interpretation of this amazing structure can visit http://tinyurl.com/nulxc9z ¹³

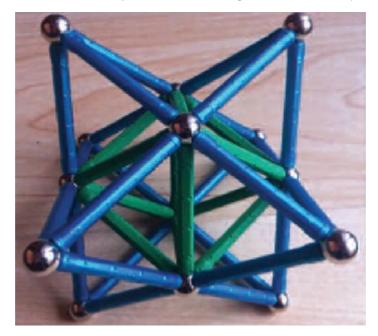


Figure 6: An 11-tetrahedra helix contains 14 balls and 36 rods that can be reorganised as a stellated octahedron. This is an example of an octahedral shell surrounded by a hexahedral shell. It might reflect the internal structure of protons in the nucleus of silicon.

If we increase the number of balls to 14, where would we put the two extra balls? One solution, which is not optimal in terms of volume but preserves the previous reorderings, would be to start from the 10-ball tetractys of figure 4 and go on stellating the octahedron until reaching a star tetrahedron (figure 6 above).

Notice that this structure contains the vertices of a cube (which is held stable by the two big "diagonal" tetrahedra) and those of its dual solid, the octahedron.

While the inner octahedron could be the spatial distribution of the six protons in a carbon nucleus, the resulting octahedron + cube structure could well be the distribution of the 14 protons in the nucleus of silicon ($_{14}$ Si), which happens to be near another minimum in the atomic properties shown in figure 2.

The picture that has started to emerge so naturally is that of nuclear protons organised into shells: once a given shell is completed (for example, the octahedron), protons start filling the next shell (the cube), and so on.

About the Author:

Jordi Sola-Soler is dedicated to the study of sacred geometry and dissemination of knowledge about it. His website includes 3D models of the sacred solids and the flower of life as well as discussion and graphics of the golden ratio in the Great Pyramid, the DNA structure, the atomic nucleus, musical scales, mathematics and much more. For additional information, visit the website http://www.sacred-geometry.es/ or contact the author at info@sacred-geometry.es/ or contact the sacred sole on www.sacred-geometry.es/ or contact the sacred sole on www.sacred-geometry.es/ or www.sacred-geometry.es/ or www.sacred-geometry.es/ or http://wwww.sacred-geometry.es/ or <a href="http://www.sa

Editor's Note:

This article is edited from the posting at the web page <u>http://tinyurl.com/q8eoel6</u>. Part two will be published in our next issue.

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FUNDAMENTAL CONCEPTS OF AETHEROMETRY

Aetherometry, the exact science of the metrics of mass-free energy (aether), is a novel biophysical and nanometric science, or scientific discipline, developed by Dr Paulo N. Correa and Alexandra N. Correa as a synthesis of experimental and analytical work that replicated, revised and continued the scientific contributions of Nikola Tesla, Louis de Broglie, Wilhelm Reich (orgonomy, orgonometry), Rene Thom (catastrophe theory) and Harold Aspden. Its object of study is mass-free energy.

Aetherometry

Since 1999, Dr Paulo Correa and Alexandra Correa have proposed an immanentist-monist model of an imponderable, dynamic aether. This model defines the aether as primary mass-free energy (dark mass-free energy) in electric (ambipolar) and nonelectric (latent heat) forms.

Mass-free energy also exists in secondary (e.g., gravitons, kinetons) and tertiary (e.g., photons) forms affected by matter, and no theory of a dynamic aether can be complete without accounting for these mass-free energy forms or without providing a model for the creation of mass-energy from aether-energy processes.

The Correas have demonstrated experimentally the existence of Reich's orgone and dorgone energies and quantitatively identified them as contiguous subspectra of ambipolar (electric) mass-free energy.

One of the fundamental characteristics of aetherometric theory is that light waves are not waves that transmit light, any more than waves need to ride or require a medium.

It is the medium (or media) that is already composed of waves, already undulatory; and what transmits the stimulus of light is not light or electromagnetic waves but precisely the Tesla radiation (or orgone), the ambipolar radiation, through its longitudinal waves.

Aetherometry therefore clarifies the relationship between transmission of the light stimulus and a local generation of all black-body photons that was once suggested by Einstein himself.

Light waves are local and solidary with the photon particles, in full agreement with classical quantum mechanics and without need to resort to relativistic transformations.

Mass-Free Energy

Mass-free energy is energy devoid of inertia; it is everywhere "present in space" or associated with various states of motion of material particles or bodies. In a wide sense, mass-free energy encompasses aether manifestations as well as photon and kinetic energy states.

The primordial or aether manifestations of mass-free energy include graviton and antigraviton states affected by matter or its particles, and, more profoundly, the cosmological manifestations of dark energy, in both electric and nonelectric forms, which are associated with the cosmological creation of material particles.

Aetherometry proposes that the world of matter relates solely, in a strict sense, to the electromagnetic and inertial properties of mass-energy particles, and that even the motion of material or mass-carrying particles or bodies results from the interaction of mass-energy with mass-free energy.

However, its object of study is not, per se, mass-free energy in states that are directly dependent on mass, such as the transient kinetic energy of mass-bound particles or the electromagnetic energy of black-body photons. Rather, the primary focus of aetherometry is the study of mass-free energy in nonelectro-magnetic forms.

Graviton Energy

Gravitons are transient, nonelectromagnetic, mass-free energy particles whose impulse (gravitational momentum) is anchored to the mass-energy of particles of matter, but which are emitted from the local aether medium (formed by the constant and ordered flux of dark mass-free energy and cosmological lepton lattices).

Both gravitons and antigravitons may also be formed and seated in the composite lattices composing the local aether medium. Gravitons anchored to mass-energy particles are described mathematically and physically as being

in a relationship of secondary superimposition with that mass-energy.

Besides gravitons, aetherometry has demonstrated the existence of primordial or primary manifestations of massfree energy in both electric and nonelectric forms, also referred to as dark mass-free energy.

Ambipolar Mass-Free Energy (Orgone and DOR), aka Tesla Radiation

Electric mass-free energy consists of ambipolar charges that are devoid of inertial effects and propagate longitudinally. In contrast to the monopolar charges (electrons, protons) that characterise ordinary mass-bound electricity, ambipolar charges continuously alternate between polar states or, to say it more accurately, constantly vary their polarity during forward propagation.

Ambipolar electricity is a mass-free phenomenon. Field capture of ambipolar energy by mass-bound (monopolar) charges results in their acceleration; deceleration of the same mass-bound charges results in the local production of black-body photons.

The Correas have published the cosmic spectrum of ambipolar radiation and the corresponding black-body spectra emitted from electrons and protons, providing exact new equations that profoundly alter the conventional theory of electromagnetism.

They have also demonstrated how the continuous ambipolar spectrum contains two biologically and physically distinct regions that correspond to Reich's distinction between orgone (OR) energy and dorgone or deadly orgone (DOR) energy. The cutoff between OR and DOR occurs at 79.4 keV. This is a strictly aetherometric discovery.

Latent Heat or Latent Mass-Free Energy

Nonelectric mass-free energy exists in both unbound and mass-bound states. In mass-bound states, it is responsible for the energy state of molecular phases, the intrinsic energy of gases, specific latent heats, most of the atmospheric energy, and the noncovalent bond energies exploited by all living systems. Its generic designation is molecular latent heat.

In unbound states, mass-free latent energy is responsible for the cosmological creation of space and the direction (diachronism) and synchronicity of absolute time.

The superimposition of unbound mass-free latent energy yields what is physically and mathematically designated as the phase energy which permits the creation of mass-energy and associated gravitons (secondary superimposition).

Thus, aetherometry affirms that all mass-energy is a transient construct of the phase superimposition of latent mass-free energy, the composite effect of aether energy units.

Black-body radiation is composed of nonionising thermal, optical and supra-optical "electromagnetic¹ (photon) radiation, forming what is called radiative (sensible) heat. Ambipolar orgone radiation indirectly gives rise (through the "medium" of electrons) to black-body radiation having wavelengths greater than 300 nanometres (nm).

Ambipolar DOR radiation indirectly gives rise to black-body (Hallwachs) photons in the UVB and UVC ranges, up to the shortest 47 nm black-body radiation (the end of the black-body spectrum).

Note that sensible heat, unlike latent heat, is composed of thermal-drift kinetons (molecular heat) and black-body photons (radiative heat).

Photons (ionising or nonionising), kinetons, gravitons, ambipolar charges and particles or units of latent mass-free energy are all mass-free particles associated with specific physical interactions or manifestations.

The demonstration of these particles' existence and the proposed new model and mathematical formalism that address their specific properties have been extracted from a nexus of systematic and diverse experimental investigations into physical and biological systems, gathered under the rubrics of experimental aetherometry, aetherometric biology and the aetherometric theory of synchronicity (AToS).

(Sources: Encyclopedia Nomadica, www. EncyclopediaNomadica.org; also www.aetherometry.com)

The Caucasian Mummies of Central Asia

The revelation in the early 1990s of Caucasian mummies unearthed in the Tarim Basin in Xinjiang, China, has rewritten the history of migrations between the West and the East. Genetic testing seems to confirm that the original people in the region were not of Mongoloid origin.

by Patrick Chouinard

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In the early 1990s, the solidity of Asian origins was forever challenged. Already, in 1974, the vast tomb of China's first emperor had been unearthed, featuring an entire army of terracotta soldiers individually carved and ornamented as if poised to follow the emperor into the afterlife.

While the terracotta soldiers merely affirmed Chinese assumptions about their own origins, another discovery dating back to the first years of the 20th century, and eventually rediscovered nearly 100 years later, would prove damaging to the Chinese worldview.

In 1988, in a room in the Urumchi Museum in Xinjiang, China, Professor Victor H. Mair of Pennsylvania University stumbled upon one of the greatest Chinese archaeological discoveries of all time: Caucasian mummies.

Scattered across the desert sands of the Tarim Basin in present-day Xinjiang were mummies so different from the standard East Asian population that they indicated a history spurred on by visitors from the West.

Their remains became known as "the Caucasian mummies of China" (also "the Tarim mummies"). They were so named because of their reddish-blond hair, Nordic facial features and European-style clothing.

The Chinese mummies present a unique problem to those who assume that the Chinese shared an isolated existence and an eternally uniform Asian population.

The discovery of the Caucasian mummies prompts us to reevaluate our definition of the term "Asian" and what exactly is implied when we use that term. It is clear that "Asian" now refers to a more diverse population than ever before.

In 2000 in the journal Molecular Biology and Evolution, a startling genetic revelation was made [Wang et al.].

According to the authors, ancestral populations in China "showed greater genetic similarity to present-day European populations than to present-day east Asian populations".

The geneticists revealed that over the past 2,500 years, a major biological transformation occurred in the Chinese population. Prior to this great change, an even more dramatic alteration occurred. So, the Chinese of today would contrast drastically with those of 9,000 years ago.

As the Mongoloids increased in numbers, their migration displaced the native white Chinese population, pushing them across the continent into Russia and Europe.

In the late 1980s, Chinese archaeologists unearthed hundreds of Caucasian mummies along the western frontier of China.

Many were over 7,000 years old, telling of a time when the pre-Aryans of Old Europe reigned in the West. Later, carbon-14 dating determined the exact age of the Chinese mummies, placing them at 3,500 years before the birth of Han Chinese civilisation.

It is most likely that they are related to an Indo-European-speaking group of Caucasians known as the Tocharians [Baumer, p. 28].

These prehistoric Chinese remains were unknown to much of the outside world until a security breach led to their announcement in 1994.

Even though the discovery only officially came to light in the late 20th century, groups of yellow-bearded peoples from the steppes had been reviewed and discussed by many ancient scholars, and they were even mentioned in Roman sources.

Pliny the Elder reported on an unusual description of the Seres (in the territories of northwestern China), made by

an embassy from Ceylon to the Emperor Claudius, that these people "exceeded the ordinary human height, had flaxen hair, and blue eyes, and made an uncouth sort of noise by way of talking", suggesting that they may be referring to the Tarim Basin's ancient Caucasian populations.

Early Accounts of Mummies

From the beginning of the 20th century, many European explorers penetrated the western frontiers of China.

They reported finding numerous ancient mummies with distinct Caucasian features dotting the Tarim Basin.

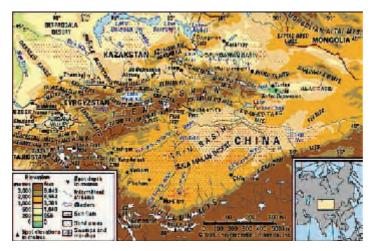
Among these stalwart individuals was Sven Hedin, a modern-day Swedish explorer whose brash and relentless drive and wanderlust resembled the expeditionary leaders of his Norse forebears.

Some of the notable historical figures who honoured him included Theodore Roosevelt, Paul von Hindenburg, and even Adolf Hitler in 1936, 1939 and 1940.

Other noteworthy explorers who blazed the trail of ultimate discovery included German archaeologist and ethnologist Albert von Le Coq and the Hungarian-British archaeologist Sir Marc Aurel Stein, whose investigations produced one of the first known photographs of a Tarim mummy in 1910.

Neither Hedin nor Stein fully understood the ultimate historical and evolutionary significance of their discoveries.

Another famed explorer of the early 20th century was Sven Hedin's Swedish countryman, Folke Bergman, who also added much to our early knowledge of the Tarim Basin.



Map featuring the Tarim Basin

He succeeded in giving one of the very first descriptions of the Lop Desert and the many graves he visited. Bergman remains a significant figure in the quest to understand further the significance of the Tarim Basin in the story of the human race. In his 1927-35 expedition history, he wrote:

"...As one approaches the hill, the top of it seems to be covered by a whole forest of upright toghraq trunks but standing too close together to be dead trees. They were presently found to be erect posts with the tops splintered by the strong winds.

"On the surface of the hill, particularly on the slopes, there were a lot of strange, curved, heavy planks, and everywhere one stumbled across withered human bones, scattered skeletons, remains of dismembered mummies, and rags of thick woollen materials.

"Some of the mummies had long, dark hair and well preserved faces. From others a ghastly-looking skull grinned out of a partly preserved blackened skin" [Bergman, p. 61].

Of one female mummy, whose face was "marvellously well preserved, though the body was much decayed", he noted:

"...On the dark-brown flowing hair, parted in the middle, she wore a head-dress of yellow felt, pointed and adorned with three red cords and the split skin of an ermine. Her brow was high and noble, she had a fine aquiline nose and thin lips, slightly parted and showing a glimpse of the teeth in a quiet, timeless smile" [Bergman, p. 74].

A Forgotten People

There were several other Late Bronze Age burials scattered in and around the Tarim Basin region. Among them there included the gravesites at Bozdong, Aqsu-Konashadar County, near the northwestern edge of the Tarim Basin, which were first unearthed in 1985 under much secrecy.

Dr Shui Tao, from Nanjing University, explained:

"One of the tombs, M41, is an oval-shaped grave with a mound of stone on the ground above it. In the grave, about twenty skeletons consisting of 8 males, 11 females, and 1 child were placed in confused positions. Grave goods include pottery, bronze, iron, bone, stone, and golden wares.

"The pottery includes bowls with round bottoms, cups with handles, and teapots with handles and spouts. All of the pottery is shaped by hand and has no decorations on the surface.

"Bronze objects are mainly ornaments, consisting of buttons, bells, and pendants. Iron objects are small tools and weapons. They include knives, arrowheads, nails, and band hooks. Bronze objects are mostly pendants, as well as ornaments and the like" [Tao].

In addition to continued reports of out-of-place mummies and forgotten populations of Caucasian nomads, Frenchman Ferdinand Grenard, between 1891 and 1893, concluded that the original inhabitants of the Tarim Basin were Caucasian [Baumer, p. 21].

According to conventional wisdom, there were two main waves of Indo-European migration into the Tarim Basin, Mongolia and the west of China. The first is the aforementioned Tocharian wave, which is divided into two groups, Tocharian A and Tocharian B.

The first entrance into Central Asia is supposed to have occurred between 3500 and 2000 BCE. The second wave of immigration is thought to have happened around 1150 BCE and lasted for several centuries, concluding in 900 BCE at the beginning of the Central Asian Iron Age (Baumer, p. 29]. These later immigrants are identified as a Northern Persian group known as the Saka.

Near the Qawrighul cemetery, at a place called the Ordeck necropolis, numerous Saka or Indo-Iranian tombs have been found. "One of the most important sites of the later Bronze Age is Zaghunluq" [Baumer, p. 29].

Evidence found in these tombs, including grave offerings and human remains mixed with animal remains, indicates that these people practised both agriculture and pastoralism and lived some time between 1200 and 700 BCE.

According to archaeologist Dr Jeannine Davis-Kimball: "From the Yanbulaq cemetery burials in shaft graves, the deceased was often placed on a wooden platform with a reed mat.

"Rich and diverse offerings that parallel the early nomadic inventory from the Eurasian steppes include arrowheads, plain mirrors, astragals, (cowry) shells, earrings, beads...bronze...iron, bone, agate and felt" [Davis-Kimball, p. 243].

Christoph Baumer made further speculation as to the ethnic heritage of these early displaced European peoples.

In his view, it is possible that persons of Tibetan stock, the Qiang, migrated to Xinjiang. In Central China, inscribed on oracle bones of Yin princes from 1200 BCE, there is clear evidence of Qiang occupancy.

"Since the western Qiang in those days lived in Gansu and western Qinghai in the north-east of Tibet, both bordering on the Tarim Basin, it may be supposed that Qiang Tibetans migrated to Chinese Turkestan. The morphological analysis of Zaghunluk skulls permits the conjecture that in the north-western Tarim Basin a certain intermixture had taken place between the Saka, the Tocharians and the Qiang" [Baumer, p. 30].

Ancient Chinese texts identified a group of people known as the Wusun and the Yuezhi. There is much documented about their dealings throughout the Tarim Basin and Outer Mongolia as well as in the Central Asian state of Bactria.

They were depicted as treacherous, yellow-haired barbarians with a propensity for destruction. In his monumental and controversial work, *The Passing of the Great Race,* Madison Grant said the following with regard to this people:

"These tall, blue eyed, Aryan-speaking Sacae were the most easterly members of the Nordic race of whom we have record. The Chinese knew well these green eyed devils', whom they called by their Tatar name, the Wu-suns', the tall ones, and with whom they came into contact in about 200 B.C. in what is now Chinese Turkestan.

"The Zendic form of the Iranian group of Aryan languages continued to be spoken by these Sacae who remained in old Bactria, and from it is derived a whole group of closely related dialects still spoken in the Pamirs, of which Ghalcha is the best known" [Grant, p. 115].

These early reports merely precipitated future revelations made by scholars and explorers alike. Some of these later

discoveries were made by such stalwart individuals as Russian explorer Pytor Kuzmich Koslov (1863-1936).

He explored the region of Western China in an effort to enter the sacred Tibetan city of Lhasa and meet the Dalai Lama, a goal he inevitably achieved. This apparent success eventually led to additional excavations that he, himself, organised.

Among some of the noteworthy sites was Khara-Khoto, highlighted by the unearthing of a tomb 50 feet beneath the ruins in which he found the body of a mummified queen "accompanied by various sceptres, wrought in gold, and other metals" [Coppens].

Koslov was permitted to take a considerable number of photographs that were later published in *American Weekly*, but in this instance he was not permitted to disturb the site further or remove any of its contents, specifically the body.

He continued onwards with a series of significant expeditions from 1923 to 1926, culminating in the discovery of Xiongnu royal burials at Noin-Ula [Coppens].

Characteristics of the Tarim Mummies

For over seven decades, virtually unknown to the West, numerous mummies and desiccated corpses with Caucasian ethnic traits have been unearthed at key locations throughout the region.

In turn, they have been removed from their tombs, analysed and displayed at the various Xinjiang museums, including the one at Urumchi, the current resting place for Charchan Man and the Loulan Beauty.



Chärchän man with red-blond hair: his clear European features still visible after lying nearly 3,500 years in his desert grave in China. (Image source: http://tinyurl.com/pk6fa23)



One of the most famous Tocharian mummies found, the so-called "Loulan Beauty", and right, her face as reconstructed by an artist. (Image source: http://tinyurl.com/knyrb9)

These "...corpses did not originally undergo any special process of mummification prior to inhumation. Their remarkable condition may be attributed to such factors as the region's aridity, the salinity of its soil, extreme winter cold, and also temperatures which vary greatly between day and night" [Kamberi].

Many of these distinctly anomalous "western" bodies are now available for study by archaeologists, even non-

Chinese scholars, which is only a recent development. Indeed, Han Chinese scholars have suppressed the knowledge of their existence in the outside world, much to the chagrin of international academia.

The mummies share many typical Europoid or Caucasoid body features (e.g., elongated bodies, angular faces and recessed eyes), and many of them have their hair physically intact. Their hair ranges in colour from blond to red to deep brown, and it is generally long, curly and braided.

"It is not known whether their hair had been bleached by internment in salt. Their costumes, and especially the textiles, may indicate a common origin with Indo-European Neolithic clothing techniques or a low-level textile technology ["Tarim Mummies"].

Also seeking answers to this ancient riddle was an American team headed by Dr Victor Mair, Professor of Chinese Language and Literature at the University of Pennsylvania, and a group of his colleagues, including Dr Jeannine Davis-Kimball, Executive Director at the Center for the Study of Eurasian Nomads [Mallory and Mair].

One of the main purposes of this team's exploration of the Xinjiang region was to investigate fully the already excavated and studied remains that the Red Chinese had denied western scholars access to.

These finds were housed in a number of museums all around the region. Each museum was another piece of the puzzle, and the mummies varied from decomposed, almost entirely skeletal, to being immaculately preserved.

In the Korla Museum, there was a 20-year-old maiden lying half-covered in a thin, orange-brown dress drenched in blood. Her face still remained distorted with agony and she had "bitten her tongue".

She appeared to have been sacrificed. Her eyes were gouged out, her limbs had been ripped out and placed directly under her pelvis, and her arms above her elbows were gone. As grisly as this mummy was, the miraculous nature of what was about to be seen next was truly extraordinary.

When the American researchers arrived at their next destination, the Urumchi Museum, they were waved into a large chamber filled with rows of mummies, some looking as if they had died within the past 48 hours, others seriously deformed or in a state of advanced decomposition.

Some appeared to be Mongolian, perhaps the ancestors of Genghis Khan, but others, as shocking as it might seem, were clearly western, dating as far back as 4,000 years before present (BP) [Barber, p. 44].

The red-haired Charchan Man, dubbed "Ur-David", bore the indelible stamp of the West in terms of both his ethnicity and his beautifully coloured leggings and clothing, the earliest examples of such clothes in known history.

Included among Charchan Man's apparent clan was a small child no older than a year; he was found nearby with his mouth open and hands clenched, and with remnants of mucus and tears. His cause of death remains inconclusive.

Wisps of blond Nordic hair can be seen peeking from beneath the rim of a red and blue felt cap, and, echoing ancient Greek tradition (see Homer), blue stones in place of the eyes as part of an obvious death-ritual in preparation to meet the gods in paradise.

Their clothing seemed reminiscent of that worn by the Celtic tribes of the British Isles and Gaul. Among the styles there were the unmistakable plaid tunics.

Textile expert Dr Elizabeth Wayland Barber noted that although it was once thought that the Scots only adopted plaid twill fabric relatively recently, it is now clear that the Celts and the Western European Grooved Ware culture before them had been using the stylised fabric for thousands of years.

Their use by the Tarim Basin people speaks of a European and even a Proto-Celtic origin.

Some speculation might lead to the assumption that this was a story of a reverse migration, and that the Celts can trace ancestry to Central Asia instead of Central Europe.

Whatever the real pattern of migration, "[t]he dominant weave [of the Urumchi people] proved to be normal diagonal twill and the chief decoration was plaid, as in the woollen twill material of a Scottish kilt" [Barber, from Knight and Lomas, p. 362].

Christopher Knight and Robert Lomas ended their speculation by writing:

"These European settlers used a woven-wool textile technology, and Barber comments that woolly sheep with a coat suitable for making woollen yarn did not appear in Europe until 4000 BCE.

"When a first sample of organic material was sent from the graves of the mummies to Nanjing University it was dated to 4500 BC, but then Beijing University dated a sample of carbon to roughly 2000 BCE" [Knight and Lomas,

pp. 362-3].

There was another mummy with clear Caucasian traits: a 40-year-old, brown-haired woman. Mu Shun Ying, the team leader of the original Chinese expedition that found her, was impressed by her immaculate state.

She called her the "Loulan Beauty", since her appearance seemed beautiful even in death. In fact, many of the mummies of the Tarim Basin exhibited an equal prettiness. Radiocarbon dating set this mummy at around 3,800 years old.

Found in close proximity to the "Beauty" was another mummy in a tomb constructed from wood. Radiocarbon dating on the materials used to construct the tomb placed its origins as early as 6,000 years BP [Barber, p. 132].

Removed from the same tomb as the two others was the honoured mistress of the tomb, clearly of Indo-European origin: tall with a high, long-nosed narrow visage and blonde hair.

"She must have been a real beauty when she was alive," said He, one of the archaeologists who initially worked on her. Her long blonde hair, almost perfectly preserved, caressed her narrow shoulders and ran downward towards the middle of her chest.

She had been rescued from an ancient burial site in 1978 by Chinese archaeologist Wang Binghua at Qizilchoqa, east of Urumchi, which is the capital city of the Xinjiang Uyghur Autonomous Region [Barber, p. 93].

As with the other mummies consigned to the dusty reaches of the Xinjiang museum, the anomalous nature of the once-glorious blonde woman led to this discovery being intentionally "buried" for almost 20 years [NOVA].

Also presented to the team was a far later relic, known as the "Hami Mummy". It was dated to around 1400 to 800 BCE and had a distinctive head of red hair. Still another group, known as the "Witches of Subeshi", managed to turn a number of heads upon their display.

Dr Barber commented in amazement about the bone-chilling scene and its apparent mythological implications:

"Yet another female—her skeleton found beside the remains of a man—still wore a terrifically tall, conical hat, just like those we depict on witches riding broomsticks at Halloween or on medieval wizards intent on their magical spells.

"And that resemblance, strange to say, may be no accident. Our witches and wizards got their tall, pointy hats from just where we also got the words magician and magic, namely, Persia.

"The Persian or Iranian word Magus (cognate with the English might, mighty) denoted a priest or sage, of the Zoroastrian religion in particular. Most distinguished themselves with high hats; they also possessed knowledge of astronomy, astrology, and medicine, of how to control winds and the weather by potent magic and how to contact the spirit world." [Barber, from Knight and Lomas, p. 359].

One collection of mummies, found at the settlement of Qäwrighul and dated to 1800 BCE, is of a Caucasoid physical type whose closest affiliation is with Bronze Age populations of Kazakhstan and the Lower Volga region [Mallory and Mair, p. 237].

The cemetery at Yanbulaq contained 29 mummies dating from 1100 to 500 BCE, 21 of which are Mongoloid—the earliest Mongoloid mummies found in the Tarim Basin—and eight of which are of the same Caucasoid physical type as those found at Qäwrighul ["Tarim Mummies"]. This is where the oldest remains have been found thus far.

Migration Speculation

In March 2010, the archaeological community was stunned by the discovery of yet another Caucasian skeleton, this time in Mongolia. DNA extracted from this individual's bones confirmed a direct genetic link to the West.

In essence, these remains are clearly European, if not Western Eurasian. This time, however, the ancient corpse was a much younger find, dated to around the first century CE, about 2,000 years ago (Bower].

The date of western arrival or habitation of China and East Asia is continually being pushed back in time to an even earlier date.

The origin of some Caucasian mummies can be traced back to some 6,000 years BP some even older. But this above-mentioned unique specimen is no less significant in our quest to understand the truth surrounding the lost Caucasian culture.

This individual was placed in high regard as a major player in Mongolia's Xiongnu Empire, an ancient state that is now believed to have been a multi-ethnic melting pot of former Eurasian nomads.

This conglomeration of foreign tongues and non-Mongoloid races no doubt consisted of a large number of Indo-European-speaking peoples (Bower].

By and large, the Caucasian mummies of China and other similar finds around the region have only fuelled more speculation concerning Lithuanian-American archaeologist Marija Gimbutas's Kurgan hypothesis.

For example, Gimbutas's hypothesis is that "Indo-European languages proliferated via several waves of expansion and conquest by nomads known as Kurgans who had domesticated horses and thus could travel long distances.

In this scenario, Kurgans left a homeland north of the Black Sea, in what is now Russia, around 6,400 years ago."

Another archaeologist and Indo-Europeanist, Colin Renfrew, holds that "farmers from ancient Turkey spread Indo-European tongues as they swallowed up one parcel of land after another, beginning around 9,000 years ago" (Gimbutas].

The argument for the Kurgan hypothesis was the discovery of large wheels found among the hundreds of blond mummies which were spread from the Pontic steppe to the western frontiers of China and then onwards to the Gobi Desert and the plains of Mongolia.

The mystery of the Caucasian mummies persists. Their discovery, their analysis and their links to the historical and folkloric record continue to guide us towards a greater understanding of mankind's primordial age. The evolution of these ancient peoples, while elusive at best, is becoming ever more transparent and accessible.

Authors Christopher Knight and Robert Lomas suggested that the people of the Tarim Basin were the Grooved Ware culture of Western and Central Europe, but they made the mistake of linking the Grooved Ware people with those described in the Book of Enoch and the Old Testament as "giants".

According to Knight and Lomas, they migrated to Central Asia in search of "high ground" to escape the Great Cataclysm foretold to them: "All the mysteries had not yet been revealed to you. You have no peace. behold, destruction is coming, a great flood, and it will destroy all." (Knight and Lomas, p. 357].

This is a purely mythological explanation; it is not to be interpreted as science. Furthermore, this link between the offspring of the "Watchers" and archaeologically verifiable European culture is less than convincing. The idea that the Tarim mummies are related to the Grooved Ware culture is scientifically viable.

It is clear from both the historical and archaeological records that Asia was once home to a lost tribe—an indigenous and racially dominant Caucasian population. East Asian ethnicity, as it is known today, is relatively recent.

There is even stronger evidence suggesting that the native Caucasoid peoples intermarried with the later Mongoloid cultures advancing from Siberia. Yet evidence for this only emerges in the physical and genetic record around 900 BCE, the dawning of the Central Asian Iron Age.

A. C. Haddon, in his classic work *The Wanderings of Peoples*, affirmed that ancient China was directly influenced by a possibly Indo-European-speaking Proto-Nordic presence during the Neolithic and Bronze Ages.

Colin Renfrew, one of the pre-eminent Indo-Europeanists, suggested that, linguistically, the inhabitants of the Tarim Basin developed from an early group of Pre-Proto-Indo-Europeans that emerged from Anatolia in 7000 BCE. Indeed, Han Kangxin even stated that they were related to the Cro-Magnons [Kangxin, p. 6], although others disagree.

Some share the opinion that it was the European races, rather than the Asiatic ones, that led to the establishment of early Chinese civilisation. It is evident that there was an ethnic migration of Tocharians from Central Europe, possibly from the lower Danube River Basin, through Caucasia, Russia and the Pontic steppe, reaching the borders of China in 800 BCE.

In 1951, German archaeologist Robert Heine-Geldern showed similarities of metallurgy in Europe and China around 800 BCE:

"The early swords of China (9th and 8th centuries B.C.), several daggers of the Dongson culture of northeastern Indo-China, as well as various Far Eastern designs correspond closely to those of the fifth period of the Bronze Age of northern Europe.

"This can only be due to the participation in the eastward migration of a group of those Scandinavians who, as Tallgren has shown, settled on the Volga around 800 B.C. The very conspicuous elements of the Hallstatt culture in the Far East would seem to correspond to the relation between the Tokharian and Illyrian languages which Sapir thought to have existed." [Heine-Geldern, p. 890]. Socketed battle-axes and spearheads used in abundance in early China were compared to those of Hallstatt and the Indo-European homeland, indicating that they were brought there by nomadic Indo-Europeans some 3,000 years prior. It has also been claimed that "European influence may have been an important factor in the unification of the Chinese states and the establishment of the first centralized Chinese empire by Ch'in Shih Huang Ti in...221 BC." [Deavin].

Horses, Wagons and Chariots

Now many scholars' once-disputed theories are being exonerated. Dr David W. Anthony, an anthropologist at Hartwick College, New York, linked the awesome migration patterns of the Indo-European race to the invention of wheeled wagons [Deavin].

These were used to great effectiveness by steppe cultures such as the Andronovo and Afanasevo. The latter, according to Anthony, was the race that proved a direct link to the Tocharians of the Tarim Basin.

In The Horse, the Wheel, and Language, Anthony wrote:

"Mallory and Mair have argued at book length that the Afanasievo [sic] migration detached the Tocharian branch from Proto-Indo-European. A material bridge between the Afanasievo culture and the Tarim Basin Tocharians could be represented by the long-known but recently famous Late Bronze Age Europoid mummies...found in the northern Taklamakan Desert, the oldest of which are dated 1800-1200 BCE.

"If Mallory and Mair were right, as seems likely, late Afanasievo pastoralists were among the first to take their herds from the Altai southward into the Tien Shan; and after 2000 BCE their descendants crossed the Tien Shan into the northern oases of the Tarim Basin." [Anthony, p. 311].

Paramount in this evolutionary migration was the utilisation and mastery of first the horse, and then the wagon and, finally, the chariot.

Like their Tocharian predecessors, later Eurasian nomads such as the Alans, Huns and Tatars of the Golden Horde or the Mongols also perfected the use of the horse as an innovation of culture and warfare.

"Horses played a prominent role in the economy of the Huns. Although our authorities do not mention that the Huns ate horse meat—perhaps because this went without saying—they certainly did, like the Scythians, Sarmatians, and other steppe peoples" [Maenchen-Helfen, p. 220].

Records also say that "the Huns, too, drank the blood of their horses" [Maenchen-Helfen, p. 220]. The Roman writer Ammianus commented that while undergoing negotiations with the Romans, the leaders of the Huns remained mounted on their horses [Maenchen-Helfen, p. 203].

These later cultures also cast light on the development of wheeled wagons, in reverse fashion:

"On their migration to the Don and from the Don to the Danube, the Huns probably transported their old people, women, and children in wagons.

"Toy wagons found in Kerch show what the wagons of the later Sarmatians looked like. Some have pyramidal towers, doubtless movable tents; others are heavy fourwheeled vehicles. The wagons of the Huns must have been similar to the toy wagons from Panticapaeum" (Maenchen-Helfen, pp. 219-20].

Extensive excavations in southern Russia and Kazakhstan have revealed 5,000-year-old burial mounds containing traces of numerous wagon wheels. Not only were such artefacts found in Eastern Europe, but also in the Gobi Desert that lies on the northeastern border with the Tarim Basin (Deavin].

It is now accepted by almost all 21st-century archaeologists that the birthplace of mounted culture was in Ukraine, thus entirely discrediting earlier assertions that identified horse-riding and the chariot as originating in China or the Middle East.

Evidence from Genetics

These mummies are a link not only to the human past but also to the evolution of Chinese and eastern culture, just as much to that of western culture. It is not the story of one culture overtaking the next, but rather a West-East synthesis.

Regardless of invasion, colonisation and total oppression, the mere contact of two distinct peoples can have ramifications beyond imagination.

In support of the mummies' distinctive European appearance, subsequent DNA testing proved their Caucasian origin.

As many more corpses were unearthed, it became evident that the original inhabitants of the region, far from being Mongoloid, were actually the descendants of a once-dominant Caucasian population.

A number of samplings from later mummies indicated that not only do these bodies have a direct genetic link to Western Europe, and even to the Pontic steppe around the Black Sea, but they also show traces of inbreeding with other tribes ranging from Mesopotamia, the Eastern Mediterranean and India. Indeed, the Tarim Basin could be considered a major thoroughfare for many of Eurasia's Caucasoid peoples.

But most importantly, these findings indicate a genetic population far older than even the Mesopotamian or Bactrian cultures, and far older than the European or Indian cultures.

Indeed, they are a possible link to a once-dominant Caucasian population that at one time inhabited much of the Earth. Considering these revelations to be true, the history of East Asia and the world now has to be rewritten.

Victor Mair noted that the Qawrighul (Gumugou), Qaradowa (Wupu) and Zaghunluq people of ancient Xinjiang, with their "deep-set blue or green eyes, long noses, full beards, and red or blond hair", may be of Nordic extraction (Mair, p. 30].

He also thought that some of the Xinjiang Indo-Europeans may have been related to the Scythians and the blondhaired Ossetes. Despite the emerging identity of the Xinjiang people, the location of their homeland is still unclear. Europe? The Pontic steppe? Why not local?

Between 7000 and 1500 BCE, could this ancient race have originated not from abroad but from a group of peoples inhabiting that region of Central Asia since their initial emergence in far antiquity?

This primaeval region of the world could now be considered the original homeland of the race that would eventually colonise Western Europe and transport European genes throughout the world.

The Vedic record known as the Book of Manu, or Laws of Manu, states that the "Uighers had settlements on the northern and eastern shores of the Caspian Sea" [Coppens].

Others have theorised that there was something more significant here than just early contact between East and West.

For instance, the noted German anthropologist Max Müller stated over a century ago that "the first Caucasians were a small company from the mountains of Central Asia" [Coppens].

It is clear that something unusual is linked to these ancient peoples, as there is widespread evidence of anomalous Caucasian-like peoples appearing in remote corners of the world—regions thought to be untouched by European and western influence.

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Crop Circles of 2015

A Persistent Intrigue

The crop circles continued their tenacious march onwards this year, surprising, fascinating and confounding in equal measure. With an expanding global reach, they still made their mark in their key centre, the fields of England.

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We've become used to crop circles. With their reappearance now seemingly cemented into the annual calendar, media indifference and public apathy haven't dissuaded whatever sources might be at work from plying their craft.

Some of the excitement of old may have receded, but there is now something almost comforting about the circles' presence.

For those fascinated by unusual phenomena, the European summer somehow doesn't seem right until a reasonable amount of new creations have arrived, bringing a quiet feeling of reassurance as normal order is restored. In the event of a circle-free year, the resulting consternation will have to be dealt with, but the patterns show no signs of giving up yet.

The numbers were fairly consistent with recent years, if down a little, with 43 global reports and 38 in the UK at the time of writing; enough to make their mark. It's still the case that those new to crop circles—and, yes, incredibly there are still people who have inexplicably been bypassed thus far—are stimulated by both the glyphs and the deep, controversial debates that naturally arise out of them.

The circles' key traditional effect, whether intentional or not, continues to have currency as minds are challenged with the notion that perhaps our understanding of the world isn't as neatly wrapped up as some would have us believe.

Early Designs of the Season

The circular year began outside of the usual English catchment areas, with Mexico kicking things off as early as 4th January with a threefold wheel in maize at Guadalajara, Jalisco, followed by Brazil with a single maize circle at Igara, Santa Catarina, on 4th March.

The UK season started humbly, with just two low-key April formations, although with the first on 9th April—a simple ring and modest appendage in very low wheat at the classic circle site of Barbury Castle, Wiltshire—this was an earlier opening than in many years.

A notable change for 2015 was that there was only one reported design in rapeseed (canola), a crop which often hosts the bulk of the first arrivals. Less rapeseed seemed to be grown in the UK this year, which might explain this anomaly.

The sole example was a slightly crude sixfold flower, reportedly made for a television program, at Yatesbury, Wiltshire, on 10th May. However, May did see two rather more ambitious English formations, one a striking and complex 13-pointed star within a stylised Celtic cross at Manton Drove, near Marlborough, Wiltshire, on the 24th, and then an unusual, four-petalled Celtic-maze emblem at Blandford Forum in Dorset on the 30th.

Other parts of Europe also began to assert themselves in May, with a simple but pleasing fivefold design at Ringslebenstrasse, near Gropiusstadt, Germany, on the 18th.

Meanwhile, the Netherlands continued its industry of formations connected with the psychic Robbert van den Broeke in the Noord-Brabant region, some simple, some more complex, against a backdrop of the usual heated debate, with four in May following a single event in April.

Six further Dutch appearances would follow during the summer, one of them a unique caterpillar-like arrangement of 13 components, complete with antennae and legs, at Bettewaardsedijk in Zeeland on 9th June—although this

was allegedly made for a school project.

The most striking non-UK design to appear in May arrived in the Fangshan District of Beijing, China, on the 8th.

Chinese formations, although rare, have appeared before, but this was possibly the most elaborate and beautiful with a very precise and sophisticated 12-petalled rim surrounding a six-petalled floral interior.

By comparison, another superpower nation, the USA, managed to produce just one lone 2015 effort on 21st May at Gray in Tennessee, a rather less ambitious emblem of three interlocked rings.

For all the keen interest in crop circles that has come from American researchers, it remains an enduring mystery as to why they are gifted so few patterns of their own.

A Busy Month in Italy

Italy began what would be a major month for the phenomenon there with two formations in June at Castelnuovo Berardenga, Siena, first a multi-ringed circle on the 2nd and then a sixfold ship's wheel-like configuration on the 3rd. Strange balls of light were reportedly seen in the area in the days before the appearances.

Italy's bonanza didn't stop there: on 7th June at Pontecurone, Piemonte, a neat eightfold mandala of flattened triangles within a ring impressed many observers, but this was then superseded by an even more elaborate formation at Ravenna, Emilia-Romagna, on the 20th.

This appeared to resemble an ingenious spoked ring suggesting papers being flicked through, superimposed by a standing circle with a small off-centre middle, giving the overall appearance of maybe Jupiter eclipsing the Sun.

At least once a year, the Torino area of Piemonte seems to offer up a remarkably fantastic crop formation and 2015 was no exception, this time on 23rd June with a very beautiful and complex 16-fold floral design replete with that region's usual theme of little triangles, dial-like segments and radiating rows of tiny rings and circles.

The rise of the circle phenomenon in Italy in recent years has seen an equal rise in the backlash from the sceptics community, and as a result of all the increased.

Other Countries in June

Germany also had a busy June, with three formations across the country. A 12-petalled flower design arrived near Berlin on the 8th, followed by a pictogram of thin rings and paths on the 15th at Landau, Rheinland-Pfalz, and then a complex eightfold mandala at Grossziethen, Brandenburg, on the 22nd.

The crop circle phenomenon also seemed to give a worldwide one-night-only tour of other countries in June.

Russia offered up a single event with a pictogram of, again, thin circles and paths at Dondukovskoy, Respublike Adygeya, on the 7th, while France did the same with a detailed motif of circles and crescents at Rauwiller, Bas-Rhin, on the 11th. Spain—not a common place for crop circles—then joined in with an attractive spiral formation at Estella, Navarre, on the 25th.

Poland finally tucked in at the end of the month at Strzelno, Kujawsko-Pomorskie, on the 30th, delivering one of the neatest "flower of life" designs seen anywhere for a few years, with an accompanying single circle.

The UK Summer

For all the highlights of overseas activity, the English crop circles did themselves no disservice this year, offering up a range of bold and attractive designs to keep things bubbling along. Of the 12 formations that the UK received in June, all of them competent, a number stand out.

In Wiltshire, two seemingly related elaborate designs of thin crescents, arrows and flattened diamonds were found at Stoford and then near Stonehenge on the 15th and 24th respectively.

A third impressive entry in the series was found on 6th July at Clearbury Ring, near Nunton. A neat, thin spiral at Sherston on 9th June was, conversely, attractive in its sheer simplicity.

An ingenious and surely challenging "carnation" arrangement of unevenly spliced crescents at Uffcott on the 22nd, however, was perhaps one of the cleverest patterns of the year, unusual and quietly striking.

Outside of Wiltshire, an old circle hotspot from the early 1990s suddenly reactivated after several fallow years, centring around Merstham, near Reigate in Surrey.

Over the summer, three intriguing formations arrived in the fields around the major junction of the M25 and M23 motorways—although none of them was actually visible from either of the roads nor indeed anywhere from the

ground.

The first arrived on 16th June, a simple ring holding a diamond-shaped component of 16 small triangles. Curiously, to his bemusement, a local retired microlight (powered hang-glider) pilot who used to fly from that very field two decades before noted that the measurements and proportions of the diamond and triangles (around 15 feet or 4.6 metres each side) had correlations with the size and configuration of his old craft.

This continued something of an odd theme: in 1993, two triangular formations which appeared in the area back then looked rather like hang-gliders.

The second Merstham arrival, on 19th July, cleverly resembled a sphere held within an open cube, while a third and even more ambitious design trumped this on 29th July in the shape of a multi-petalled Tudor Rose-like motif contained within two thin-ringed Celtic crosses.

Just over the border, nearby Horsham in West Sussex received a formation on 22nd June, its skeletal structure suggesting a six-pointed star of thin, 3D rectangles.

July in general saw bursts of ingenuity across several English counties.

A star and crescent design ringed by small rectangular boxes at Stonehenge on the 10th was crying out to be turned into a car company logo.

The Rollright stone circle in Oxfordshire received a nearby mandala on the 15th, suggesting a pentacle enveloping a crescent, while a related but more complex arrangement took things further at Haselor, Warwickshire, on the 19th.

Fairford in Gloucestershire supplied one of the neatest formations of the year on the 21st, with a simple yet very beautifully swept set of two crisp circles within a larger circle, superimposed over an implied third one behind them.

Stroud Green in Essex, after a very busy 2014, gave forth just one entry this summer, also on the 21st, with a complex if slightly wonky mandala of squares and crescents with three "handles" on its perimeter.

Two Iron Age "castles' then hosted major formations one night after the other. Wiltshire's Barbury Castle saw the arrival of one of the most unusual designs of the year on 25th July—a very elaborate Aztec-looking "bird of prey" with stylised wings and a tail.

Controversially, within its otherwise neat frame, wobbly tracer paths provided feather textures, as if "hand drawn".

Some felt that this was a deliberate style choice, while others saw it as last-minute sloppiness. As ever, one's viewpoint on the origins of the circles tends to influence one's assessment of the results.

The second castle, the famous and huge hillfort of Maiden Castle in Dorset, had its moment the following day, on 26th July, with a sophisticated wheel of orbiting circles and rings surrounded by a perimeter of seemingly notched blocks, suggesting perhaps some form of data to be decoded.

Maiden Castle, although not as central a site as Barbury, has had several crop formations around it in previous decades.

Six more formations graced English fields in August, the most notable—possibly one of the most striking appearances of the year—being an advanced wheel-like design at Bowerchalke, Wiltshire, on the 8th, somewhat suggestive of evenly shattered glass.

Among the top-rankers was another bird-like emblem, minus the wobbly lines this time, near Stratford-upon-Avon in Warwickshire, and again a shatter-like mandala of stretched six-pointed stars at Etchilhampton, Wiltshire, on the 19th, although this was controversial for having two rectangular blocks within it that looked to some like "unfinished" components.

At the time of writing, this was the last formation of the English summer, although a few other events may sneak in before the season's end.

More Global Activity

Other countries continued to throw up their own competition throughout July and August, with Germany providing five more entries, often modest in size and floral themed but with one exception at Furstenfeldbruck, Bavaria, on 16th July, which saw an ambitious, eight-pointed star comprised of intermeshed Escher-like standing pathways. Bavaria has offered up several major designs in the last few years.

The Czech Republic hosted three formations in July, with the most impressive and unusual arriving at Klicnov in the Libereck Region on the 12th, seeming to suggest some kind of sea creature with a multiplicity of rings, circles and

"tentacles" comprising a bulbous form.

Meanwhile, Russia, Slovakia and Norway had one formation apiece in July or August, with Brazil receiving two more and the Netherlands continuing its run of Robbert-related events.

The Phenomenon Comes Full Circle?

As the years have gone by, mainstream attention, esoteric speculation and many hopes and fears for the crop circles have all come and gone, but rather pleasingly the patterns themselves have serenely continued on, apparently unaffected by people's expectations of them. They now just simply *are*.

The world of core crop circle research, of course, though recruits are diminished in number from the glory days, remains lively, with arguments continuing in Wiltshire over who controls access to the formations, as just one group now makes official arrangements with the small pool of farmers left who remain tolerant of visitors to their fields.

Some believe it to be the perfect solution, while others argue it is a kind of cerealogical hegemony.

The rise in cheap drone technology is also challenging the former reign of the more expert aerial photographers, with small buzzing objects that have nothing to do with extraterrestrials or the military being seen increasingly over the fields as enthusiasts take advantage of a simpler way of gazing down on something.

Conflict has arisen here, too, perhaps inevitably, as visitors to formations complain of harassment from the new technological terrors.

An altercation arose this summer when one researcher threw his boot at an invading drone, provoking a confrontation with its controller, which led to punches being thrown. In other words, human nature continues to carry on as normal, whatever the higher function of the beauty being investigated.

How much relevance any of this "croppie" culture now has to a wider world is questionable. Indeed, the signs are that various factions have, finally, just come to terms with the fact that their own views on the phenomenon generally hold no sway at all over others.

People believe what they believe, regardless. But does it even matter? Even the sceptics' view seems to have come, literally, full circle.

At an event in Preston, Lancashire, this year, a former claimed human circlemaker gave a talk on his activities in which he stated, unambiguously, that he now felt he had been guided by "higher forces" to create his art.

Although not a new claim, its re-emergence felt timely for these more all-embracing times. How, after all, can this concept really be any less bizarre to sceptics than the idea of higher forces just bypassing the human element and making formations directly, too? I

n other words, even those who were once arch-debunkers seem at last to have accepted the rather wonderful reality that a number of more open-minded researchers came to understand long ago: that with the crop circles, frankly no one knows what the heck is going on.

Whatever the answer to all this is, it is far too complex and full of grey areas ever to be fully pinned down. Believe what you like, the patterns seem to say:

"We are here and we are radiant regardless, so why not come on in, or stick our picture on the wall, or make us your iPhone wallpaper?"

Why not just go with the wonderful madness and freeing of the mind that comes with not actually knowing what's going on? Too much of modern life is forcibly and often misguidedly deterministic.

Another event, in July 2015, that suggested the closing of a circle, in one way at least, was the celebration of the 25th anniversary of the Glastonbury Symposium.

I have a bias, as it is something I've been involved with for at least 21 of those years, but its high reputation is reliable. It began as a think-tank to discuss the explosion of complex crop patterns that had hit the United Kingdom in 1990, but it has since become the country's longest-running "alternative" conference covering all mediums.

Over the years, the Symposium's remit inevitably had to expand to take in all the many theories and other pathways of thinking that the enquiry into the circles had begun, and now it stands as a broad forum for exploring anything and everything, from other unexplained mysteries and global conspiracies to alternative health and environmental and spiritual/ psychological discussions of all kinds.

All this began from the simple existence of pretty patterns in the fields—a sobering lesson. What the circles stimulate is expansion, irrespective of origin.

Twenty-five years later, crop circles continue to remain a topic of discussion at the Symposium, and the banners on the walls inside still celebrate the art itself, but the phenomenon has now taken its correct place as just one path of enquiry among many, albeit one that continues to provoke and confound in its unique way. Long may it continue to do so.

About the Author:

Andy Thomas is one of the world's leading mysteries researchers. He is the author of the acclaimed book *The Truth Agenda: Making Sense of Unexplained Mysteries, Global Cover-Ups and Visions for a New Era* (Vital Signs Publishing, 2009-2013; Adventures Unlimited Press, 2015; see reviews in 19/04, 16/06) and also *Conspiracies: The Facts—The Theories—The Evidence* (Watkins Publishing, 2013; see 20/05).

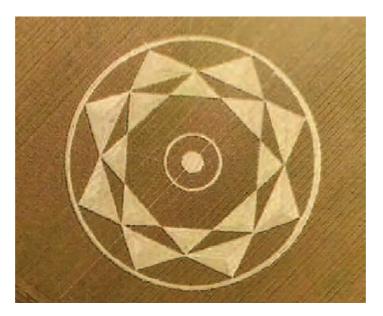
Thomas is the author of five books on the crop circle phenomenon including *Vital Signs* (9/06) and *An Introduction to Crop Circles,* considered by many to be definitive guides.

He lectures widely around Britain and the world, and has been a guest on many TV and radio programs. His annual crop circles roundups have been published in NEXUS for the last 16 years. For more information, go to:

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- www.glastonburysymposium.co.uk. Andy Thomas can be contacted at info@vitalsignspublishing.co.uk.

Crop Circles of 2015

Image Gallery



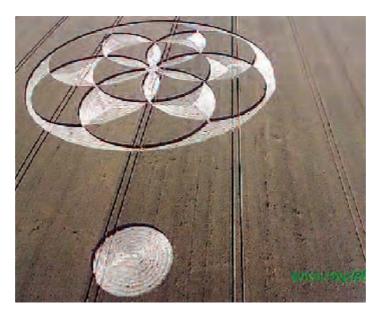
Pontecurone, Alessandria, Italy. Reported 7 June. Image: Conal Doyle © 2015



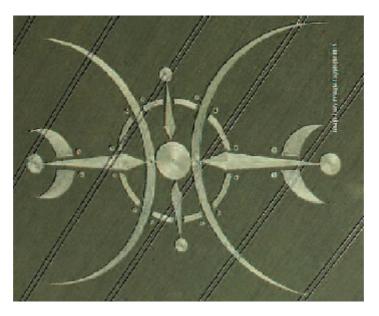
Ravenna Waterski Club, near Cervia, Italy. Reported 20 June. Image: Angela Galeotti © 2015



Aeroporto di Torino-Aeritalia, Turin, Piedmont, Italy. Reported 23 June. Image: Valeria Margherita Zanola © 2015



Strzelno, Kujawsko-Pomorskie, Poland. Reported 30 June. Image: www.wylatowo.org.pl



Clearbury Ring, near Nunton, Wiltshire, UK. Reported 6 July. Image: www.LucyPringle.co.uk



Winterbourne Stoke Down, near Stonehenge, Wiltshire, UK. Reported 10 July. Image: www.MrGyro.co.uk



Münchener Berg, Fürstenfeldbruck, Bavaria, Germany. Reported 16 July. Image: Frank Ziegler © 2015



Rudower Wassergarten, near Lichtenrade, Germany. Reported 13 July. Image: Cindy © 2015



Hoo Mill, near Haselor, Warwickshire, UK. Reported 19 July. Image: www.MrGyro.co.uk



Maiden Castle, near Dorchester, Dorset, UK. Reported 26 July. Image: www.CropCircleConnector.com



Etchilhampton, near Devizes, Wiltshire, UK. Reported 19 August. Image: www.LucyPringle.co.uk



Furzefield Shaw, near Merstham, Surrey, UK. Reported 29 July. Image: www.MrGyro.co.uk



Hampton Lucy, near Stratford-upon-Avon, Warwickshire, UK. Reported 8 August. Image: www.LucyPringle.co.uk



Ox Drove, near Bowerchalke, Wiltshire, UK. Reported 8 August. Image: www.LucyPringle.co.uk



IS THERE A SECOND SPHINX ON THE GIZA PLATEAU?

by Gerry Cannon with Joseph P. J. Westlake © 2011-15

It seems clear from Vivant Denon's etching below that at the time of Napoleon's visit in 1798-99, all that was visible of the Great Sphinx was its shoulders and head.



View of the Sphinx, near Cairo by Vivant Denon, c. 1798, published in 1802-03. (Source: http://www.freemaninstitute.com/sphinx.htm)

The first attempt to dig it out dates back to 1400 BC, when the young Thutmose IV, falling asleep beneath the giant head, dreamt that he was promised the crown if he would only unbury the Sphinx.

After much effort, only the front paws were uncovered. To commemorate this effort, Thutmose IV had a granite stele known as the Dream Stele placed between the paws.



The Dream Stele of Thutmose IV in front of the Sphinx (Source: Wikimedia Commons)

In 1817, the first modern dig, supervised by Captain Giovanni Battista Caviglia, uncovered the Sphinx's chest.

Egyptology dates the Giza structures to around 4,000 years; nevertheless, many scholars point to substantive evidence indicating an age for the Sphinx of at least 10,000 years. So there is a major difference of opinion as to the age of the Sphinx, although I believe that it is much older than the pyramids.

The body of a lion and the head of a man: how can such an enigma be explained? Again, there are differing interpretations as to how or why the riddle has arisen.

In at least one TV documentary, Dr Zahi Hawass, the then Secretary General of the Supreme Council of Antiquities (SCA), naturally shared the view of his American friend and fellow Egyptologist Dr Mark Lehner that the Sphinx's face is that of the pharaoh Khafre (or Chephren).

Unlike the pyramids constructed with innumerable blocks of rock, the Sphinx is carved in one piece from the indigenous, underlying, natural rock. But why would the Sphinx have an oddly offset alignment compared with its supposedly related neighbours that are positioned according to an incredibly precise mathematical layout on the Giza Plateau?

It was in December 2003 that I made the acquaintance of Dr Hawass, Adel Hussein Mohamed, the General Director of Giza Pyramids, and Dr Mansour Boraik, the Chief Inspector of the Giza Pyramids Plateau (2002-2005).

During my visit to Cairo in March 2005, Adel gave me permission to enter the Chephren pyramid (also known as the Pyramid of Khafre) with a guide after it was closed to the public. As I came out of the pyramid I gazed in the direction of the Sphinx, which is situated on lower ground than the Chephren pyramid. It was then that I noticed that the Sphinx is offset and not directly lined up with the apex of the pyramid.

With that thought in mind, I could not help wondering if there is more than one Sphinx. As the Sphinx is offset from the pyramid and facing east, then perhaps it was meant to act as a guardian. If so, could there be a pair of them? The Chinese Imperial guardian lions that guard temples (also called *"fu* dogs") are in pairs. Pairs of sphinxes exist elsewhere in Egypt, flanking avenues or entrances to important buildings.

I noticed a large mound to the north of the Sphinx. This would be the location of my proposed buried Second Sphinx. My later superficial examination of the hard surface suggested that this is compacted sand that has not been disturbed for a very long time, perhaps centuries.

Since the Sphinx had only been reexcavated in the 1930s, this was clearly not the spoil heap resulting from that excavation. Nobody seems to know what did happen to all that sand and rubble.

I came across an old slide of a photo taken from the top of the Great Pyramid in 1934 by the Keystone company; it clearly shows the same mound. It was approximately the same length and width as the Sphinx in its enclosure, and the top of it was at a somewhat higher elevation than the top of the Sphinx's head!

If my theory is valid, then that mound is not just sand but could well be concealing the area where another Sphinx might lie buried.

When I visited Adel a year later, I described what I had observed and asked him if the mound had ever been

explored. Looking closely at my illustrations, he replied that, as far as he knew, no one had ever suggested that there could be other major structures buried out there. I asked if I could discuss it with Dr Hawass, but he was not in Cairo.

I needed to find out the approximate distance from the top centre of the head of the existing Sphinx to the eastern base of Chephren. The easiest way to do that was by checking the distance on a car odometer.

Adel let me use his truck, and I stood on its back while his driver drove down the road from the Pyramid to where the Sphinx is. I instructed the driver to turn his vehicle to face the Chefren pyramid and drive slowly towards the Sphinx.

When I could see that we were in line with the Sphinx's head, I had the odometer set to zero; and once we had driven to a point in line with the eastern edge of the pyramid, the distance travelled was 600 metres.

It would be no great task—and would certainly not disturb any construction, as the area is only sand—for a pilot hole to be drilled into the spot calculated from the Sphinx's head to the mound. If the drill were to hit something hard at the appropriate depth into the sand, then it would be worth investigating by digging the short distance down into it.

On the other hand, there is the standard modern archaeologist's technique of scanning the mound with groundpenetrating radar. Even more technologically advanced and sophisticated is the use of scanning satellite images by Sub-Terrain Prospecting.

Although many believe that the Sphinx on the Giza Plateau has a male face, it is generally agreed that its original face has been altered. The fact is that there is some evidence that there was another Sphinx—a female Sphinx.

Geologist and archaeologist Dr Aly Barakat from Cairo has been researching mediaeval Arabic writings for several years. He has found that the famous Muslim geographer Muhammad al-Idrisi (1099-1166 AD) mentioned that there were two sphinxes at Giza, opposite each other.

The second Sphinx was supposedly female and situated on the eastern bank of the River Nile facing the presentday male Sphinx. Where did the female Sphinx go? That second Sphinx was apparently destroyed in 1311 AD when an earthquake levelled most of Cairo.

My research also revealed that an Egyptian amateur Egyptologist named Bassam El Shammaa believes that there is a second Sphinx on the Giza Plateau. He bases his belief on the Egyptian tradition of always placing Sphinx statues in pairs, as guardians for temples—and that certainly matches my theory. He has also had problems trying to persuade Dr Hawass to take his hypothesis seriously.

As mentioned, between the paws of the Sphinx is a stele. It is a carved slab of stone on which two sphinxes are depicted at its top. El Shammaa suggests that we should take this image literally, whereas conventional archaeologists believe that the two sphinxes are just a repeated image of the same sphinx.



The two sphinxes from the Dream Stele (Photograph taken by Robert Bauval on the author's request; reproduced with permission.)

As you can see from the image above, the two sphinxes differ from each other in a number of important ways, a matter which to the best of my knowledge has never been raised before by anyone, including the archaeologists!

It appears that the left-hand sphinx face looks male and the right-hand face looks female. Furthermore, the head and its face appear more masculine when compared with the more female-looking profile on the right.

Another interesting observation is the discrepancy between the level of the base of the Sphinx and the level of the base of the Chephren pyramid. The Sphinx is some 40 metres lower than the Chephren pyramid.

If my hypothesis has any foundation at all, then the two sphinxes were carved in order to perform as guardians but of what? Surely not the Chefren pyramid itself, since all would have been constructed at the same level as the Sphinx.

Many learned scholars and scientists have proposed that if the Sphinx is much older than the pyramids, then there could be chambers or constructions beneath the pyramids. These would be at the same level as the supposed

guardian sphinxes.

My proposal that the function of the Sphinx (or pair of Sphinxes) is to guard something beneath Chephren is not without foundation. I have suggested that whatever that "something" might be, it is reasonable to suppose that it could lie at the same horizontal level as the base of the Sphinx, and the two could be connected at that 40-metre level.

Nevertheless, it should be borne in mind that among the many and varied investigations, explorations and excavations that have taken place on the Giza Plateau in recent decades is the Tomb of Osiris project.



Aerial photograph of the Giza Plateau (Source: Google Maps)

The Tomb was an incredible find. The extent of the tunnels, passageways and chambers explored is remarkable. It lies some 197 metres behind the Sphinx, along the line of the causeway that leads from the Sphinx Temple towards the Chephren pyramid, and descends some 30 metres underground.

Apparently there are some tombs located close to the mound, and a Russian archaeologist, Dr Eleonora Kormysheva, spent a few years researching them with her team. I contacted her several years ago and asked whether she had investigated the section of the mound where my presumed Sphinx is buried. She sent me their report.

I noticed a blank area where I predicted the position of the buried Sphinx to be, and I sent the drawing back to Kormysheva, asking what they'd discovered in that area. A couple of days later came another surprise when her email stated:

"The area marked on your plan is out of our concession. You have to address Boston Museum, to which that area belongs."

I wondered why the SCA would not give a concession to the Russian team to investigate that particular area. Apparently the museum did not know who had a concession and whether it had ever been investigated.

When I visited the museum's website, I enlarged its aerial photo of the Giza Plateau and found that it distinctly showed that nothing had been investigated on the area in question.

The complete top of the mound is a specific area which includes the aforementioned tombs and the place where another Sphinx could be buried. If the museum or anyone else had applied to the SCA for a permit to investigate the mound, then surely a permit would have been requested not only for that blank area but surely for the complete mound!

I thought it was time to try to obtain infrared satellite remote-sensing imagery of the mound and contact a UKbased company, Fugro NPA Ltd. Charlotte Bishop, MSc, the Remote Sensing Projects Manager, proved exceedingly sympathetic to my project and, for no more than a couple of hundred pounds, provided me with some seriously helpful pictures.



The mound, marked with an oblong band, could be where a Second Sphinx is buried. (Source: Charlotte Bishop, Fugro NPA Ltd)

Among them is an image of the relevant area of the Giza Plateau; I've indicated this with an oblong band showing where a Second Sphinx could be buried (above).

No doubt a discovery of a Second Sphinx would boost well-needed tourism in Egypt to help its economy, and there would also be archaeologists visiting from around the world.

Perhaps an archaeological university, institution or influential society will find this interesting enough to become involved. It would then require a permit from the SCA's successor, the Ministry of State for Antiquities (MSA), to investigate the mound using ground-penetrating radar or other technology.

If favourable signs of a Sphinx-shaped abnormality under the mound are shown, then an application can be submitted to the MSA for a permit to carry out a detailed excavation.

The so-called Sleeping Prophet, Edgar Cayce, predicted that the Hall of Records would be found under the paws of the Sphinx. Could he have meant the Second Sphinx?

About the Author:

London-born Gerry Cannon lives in southern Spain. His fascination with Egypt began in 1957 when he was stationed there as a British Army photographer.

Since his retirement from business, he's been pursuing interests in paranormal mysteries and is writing a book about the search for the Ark of the Covenant. He can be contacted at arkquest2002.@yahoo.com.

For more information, visit his website <u>http://www.gerrysarkquest.com</u>. The original 2011 version of his article, written with assistance from Joseph P J. Westlake, is available at: <u>http://tinyurl.com/p489je2</u>



TAKEN

by Karla Turner, PhD WordMean Publishing, 2013, 2nd ed. (first published in 1994) ISBN 978-1-490459-08-0 (241pp tpb) Available: wordmeanpub.weebly.com

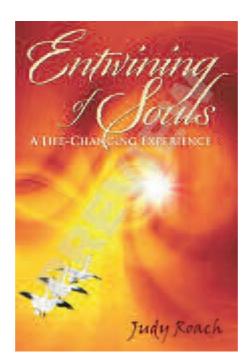
A respected academic, Karla Turner, PhD, along with her family, had a history of alien encounters, described in her 1992 book *Into the Fringe*. After publication, she was contacted by a number of women who were trying to make sense of their own experiences.

In her 1994 follow-up, *Taken*, Dr Turner presents the cases of eight of these women, born between 1943 and 1966, most of them claiming that their abductions began in childhood and were ongoing. Their stories have common threads as well as unique differences.

Their reports include UFO sightings, missing time, virtual reality scenarios, abductions by various entities (Grey, White, Reptoid, Cat-Eyed, Hooded and more), military presence, examinations, implants, telepathic communication, sexual activity, missing or taken foetuses, levitation, and physical effects from scoop marks to rashes. Many of them were told that they were "chosen" or "special" (a mind-control deception, some of them think), and that disaster would soon befall the Earth.

Sadly, Dr Turner died in 1996 at only forty-eight. Her husband, Elton Turner, gave his approval for this reissue, which has a new foreword by Nick Pope, former UK MoD UFO desk officer, and the original one by UFO researcher Linda Moulton Howe.

Dr Turner's book has historical importance and is still relevant, for the alien abduction phenomenon is as mysterious now as it was then.



ENTWINING OF SOULS

by Judy Roach MBS Press, Australia, 2014 ISBN 978-1-921883-18-7 (476pp tpb) Avail: www.mbspress.com; Amazon

The tangled connections that we have with other people may involve unresolved past-life issues that can have major impacts on our present lives.

A former policeman in England, Judy Roach found this out in the early 1980s when she and a friend were restoring a 14th-century building—occupied by the spirit of a murdered girl. With help from a handful of trusted clairvoyants, Roach freed the girl and embarked on a path to realise her spiritual gifts.

In the process, many people close to her presented obstacles to her every move—people with whom she has pastlife links, as she learnt from her psychic and mediumistic contacts. She also found out about other past lives affecting this one, including as an Aboriginal Australian. In time, she moved to Australia.

Roach recounts adventures with her spirit guides and how she received messages about what her next step should be. While often strange directives, they always bore fruit. All the while she maintained her trust in the process.

She eventually set up the Healing Garden of Dongara, north of Perth in Western Australia, and the Ten Year Mary Project, working with spiritual guidance and Earth energies and attracting soulmates from around the world to resolve their past-life karma. A captivating story.

THE END OF DAYS

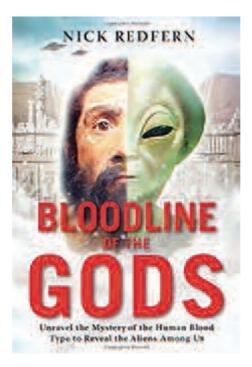
by Zecharia Sitchin Bear & Company, Rochester, VT, USA, 2014 (first published in 2007) ISBN 978-1-59143-200-5 (310pp hc) Available: BearandCompanyBooks.com

In *The End of Days,* the seventh and final volume of *The Earth Chronicles* series (see 21/06), Zecharia Sitchin interprets Sumerian, Babylonian and Akkadian cuneiform texts to show that the past is the future.

Sitchin died in 2010, but his work still has currency yet provokes controversy. Some of these texts gave prophecies that found their way into the Book of Revelation; one of them, about "the breakup of Babylon/Iraq into three parts", is chilling, considering recent events in this region.

According to Sitchin's reading of the texts, the troubled history of the Anunnaki "gods" reached a climax in 2024 BCE with nuclear devastation and the end of the Sumerian culture. Evidence can still be seen on the Sinai Peninsula and around the Dead Sea. Twenty-one centuries later, it reached another climax in Jerusalem.

Sitchin's interpretation is that events go through a cyclical repetition, as reflected in the ancient prophecies and biblical writings. Referring to an Earth-Mars cylinder seal bearing the sign of two fishes, Pisces, Sitchin suggests that the Anunnaki and their planet Nibiru are due to return by the end of the Age of Pisces, another 21 centuries later in this great cycle.



BLOODLINE OF THE GODS by Nick Redfern New Page Books, NJ, USA, 2015 ISBN 978-1-60163-365-1 (244pp tpb Available: www.NewPageBooks.com

About 10 to 15 per cent of humans have Rh-negative blood (i.e., not containing an antigen linked to the Rhesus macaque monkey), but nearly 40 per cent of the Basque people of France and Spain have this negative factor.

While it's been posited for almost a century that the Basques are descendants of the Cro-Magnons, Nick Redfern (21/06, etc.) takes the argument further by suggesting that the Cro-Magnons were the product of genetic alteration of *Homo erectus* by an extraterrestrial race with no relationship with the primate family bloodline. So, people with Rh-negative blood could well be related to "an archaic, alien bloodline".

Redfern reviews the Sumerian myths about the Anunnaki and their genetic tampering, speculating on why they would want to create a new race with new blood.

He suggests that Rh negatives have different physical and mental attributes, a keen interest in science, UFOs and the paranormal, lower blood pressure, better disease resistance and greater psychic abilities than the Rh-positive population in general.

Not one to run from a conspiracy discussion, Redfern cites evidence for secret government monitoring of Rhnegatives and for a higher proportion being alien (or military) abductees. Inherited memories, faerie contacts and even owl-related UFO encounters are more common with Rh negatives.

Redfern wonders what would happen if it were proved that Rh negatives were the product of alien intervention in humanity's formative years. Would there be a backlash, a form of "ET racism" born out of fear that they may be part of a sinister, alien agenda? Time may tell!

TESLA TECHNOLOGY

by George Trinkaus High Voltage Press, OR, USA, 2015 ISBN 978-0-692-37412-2 (127pp pb) Available: Teslapress.com www.ploughbooksales.com.au

Since 1986, electrical experimenter George Trinkaus has been publishing a series of booklets about Nikola Tesla

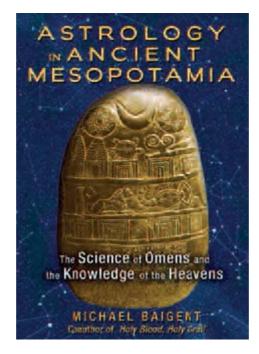
and his revolutionary inventions. Now he's combined all of these titles into one revised volume, *Tesla Technology*, with additions from his Teslapress.com website on Tesla electrotherapy devices and Tesla's 1919 "True Wireless" article.

Trinkaus leads with a brief Tesla biography before launching into detail on the disc-turbine rotary engine, the sparkgap oscillator, the Tesla coil, the magnifying transmitter, lighting and transport systems and a free-energy receiver. He rewrites Tesla's "techno-legalise" and adds his own informed commentary.

The "Radio Tesla" section covers high-voltage, sudden-pulse, low-frequency wireless transmission, ground conduction, Earth resonance and the global broadcasting system. Trinkaus makes it clear that Tesla was no fan of Hertzian radio-telegraphy, and was a firm exponent of the aether as the medium of all electric phenomena.

In "Tesla DIY", Trinkaus explains how to build Tesla coils and other devices. He includes an extract from Tesla's 1899-1900 Colorado Springs diary as well as an essay that deconstructs "the Tesla mystique".

This is a must-have book for Tesla buffs and anyone who wants to go beyond the mythology and get to the core of Tesla's technological legacy.



ASTROLOGY IN ANCIENT MESOPOTAMIA

by Michael Baigent Bear & Company, Rochester, VT, USA, 2014 (first published as *From the Omens of Babylon* by Arkana, 1994) ISBN 978-1-59143-221-0 (245pp tpb) Available: BearandCompanyBooks.com

Records of probably the oldest known writings on astronomy and astrology have been unearthed from the ruins of ancient Mesopotamia since the mid-19th century. Some records relate to Sumeria, but more of them to the later Babylonian and Assyrian empires.

According to Michael Baigent, the co-author of *Holy Blood, Holy Grail* (1982), former editor of *Freemasonry Today* and author/co-author of a number of titles, Mesopotamian astrology was not about the zodiac or even personal readings, but about king and state. Astrologers were expected to provide details about planetary movements and report to the king on portents suggested by these celestial changes.

If they failed, they lost their royal patronage Predictions of planetary positions and eclipses meant the difference between going to war in times of drought or staying put in times of plenty. Many of the cuneiform tablets of astrologers' writings to the king could only be dated in recent times because of the astronomical information they provide. Baigent's perspective is that Mesopotamian astrological, magical and religious knowledge was transferred from the vestiges of that culture to become part of a pastiche that influenced the rise of the Renaissance. Michael Baigent died in 2013, but his work lives on.

RESTORING THE SOUL OF THE WORLD

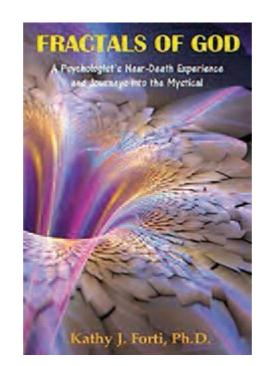
by David Fideler Inner Traditions, VT, USA, 2014 ISBN 978-1-62055-359-6 (309pp tpb) Available: www.InnerTraditions.com

Ancient and traditional peoples were highly attuned to the rhythms of nature. Even up to the Renaissance, people had a communal bond with nature.

All this changed with the Scientific Revolution of the 16th and 17th centuries and its new view of the world as an inanimate clockwork mechanism ticking away to laws instigated by God, the "divine engineer". The machine model pitted humankind against nature.

Dr David Fideler, a former professor, editor and publisher with a PhD in philosophy and the history of science and cosmology, looks at ways to overcome our predicament. He maintains that in the last century, every premise on which the machine model was based has been shown to be false. He points to recent discoveries that undermine the alienating mechanistic worldview and are leading us back to identifying with the living, intelligent universe.

Dr Fideler focuses on the inroads that have been made in working with living organisms to clean up toxic wastewater and regenerate entire ecosystems. His vision is for us to participate creatively in cultivating all life and restoring the beauty, fertility and resilience of nature.



FRACTALS OF GOD

by Kathy J. Forti, PhD Rinnovo Press, CA, USA, 2014 ISBN 978-0-578-13772-8 (232pp tpb) Available: www.RinnovoPress.com Amazon.com.au Amazon.com A desire to be of service to others led Kathy J. Forti into healthcare, initially working with children and then obtaining formal qualifications in psychology and counselling.

Her curiosity also led her to study out-ofbody phenomena at The Monroe Institute in the early 1980s. In her practice, she had great success in utilising neurofeedback techniques, and she also investigated healing with Rife frequencies.

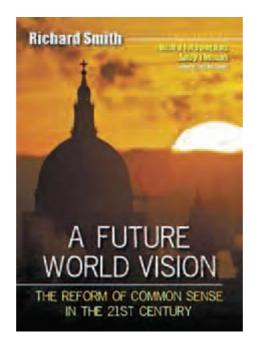
When Dr Forti had a near-death experience in 2003, she travelled out of body and encountered multidimensional light-beings who transmitted higher mathematical and scientific knowledge to her. These Guides urged her to create a healing technology that would benefit people on physical, emotional, mental and spiritual levels.

Dr Forti rushed headlong into studying sacred geometry, DNA coding, fractal patterns, sound, crystal energy and computer technology, developing algorithms that would strengthen the information codes that were coming in through the fractal field.

Despite the challenges, Dr Forti developed her Trinfinity8 system, which transmits coded data streams to the body via a computer and specially designed crystal rods.

The codes help with energy balancing, restoring life force, body sculpting, skin rejuvenating and other physical healing effects by shifting the body into a higher vibrational state. They also rebalance mental and emotional states.

Dr Forti discovered that the technology can be used in remote healing and even has uplifting spiritual aspects. Her system is a revolution in 21st-century healing.



A FUTURE WORLD VISION by Richard Smith Vital Signs Publishing, UK, 2015 ISBN 978-0-9550608-3-0 (264pp tpb) Avail: www.vitalsignspublishing.co.uk

Our political, economic and social systems are in need of urgent reform and need a dose of common sense to fix the problems, says UK author Richard Smith, whose ophthalmology career has taken him around the world and helped him see the big picture in geopolitics.

His book has a foreword by Andy Thomas, author of The Truth Agenda (see his crop circles round-up in this issue).

It helps to put the past into context, and Smith analyses six periods from the French Revolution of 1789 to this current period, 2004-2047, with its increasing restrictions on our basic freedoms.

Next, he discusses the inconsistencies of economics and religion, the education challenge, the poverty of politics, the technological divide, ethical dilemmas (armaments, pharmaceuticals, food, banking), rising world population and ideas for enlightened world government.

He argues for a "steady state" approach, not growth at all costs, consumption based on living within our means, and a debt-free economy that balances income and expenditure.

Smith also explores shifts in consciousness and spirituality, the implications of ETs in our midst, free-energy alternatives and a path of truth where we develop fresh thinking towards establishing "genuine community".

He calls on us to value and uphold our democratic rights, despite the flaws in our democracies. An insightful guide to addressing our seemingly intractable situations.

50 HUMAN STUDIES: A NEW ULTRASOUND BIBLIOGRAPHY by Jim West Harvoa Publishing, NY, USA, 2015 ISBN 978-1-941719-02-2 (127pp pb) Avail: www.harvoa.org Amazon.com

Western authorities claim there are virtually no clinical human exposure studies on the hazards of diagnostic ultrasound (DUS).

But actually, to the contrary, high-tech clinical studies dominate the modern era, clearly indicating hazards.

Jim West, a New York-based independent researcher in environmental medical issues, has assembled an unprecedented bibliography of about 50 Chinese Human Studies and 10 overviews from 1988 to 2011 (see his article in this issue).

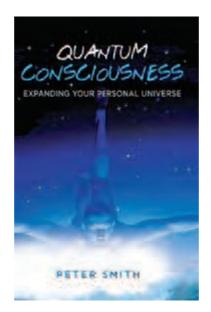
These show foetal damage following *in utero* exposure to DUS within one minute or more of exposure. Intensity levels were low compared to those used in Western clinical practice.

Women volunteers were exposed to DUS, and their terminated foetuses examined for biological effects. Damage was observed for neurons, DNA, corneas, chorionic villi, ovaries, testes, kidneys, glands and more. These studies are not readily available online or in the PubMed database.

Few Western studies have been conducted since 1991 when the US FDA raised the machine intensity limit by a factor of eight.

Ultrasound critics have long argued that the rising epidemic of childhood diseases since the early 1990s is due to the increasing intensities and sessions of routine ultrasound. Additionally, machines and operators have not been well regulated.

The Chinese Human Studies give considerable cause for concern. West supports comprehensive reviews of these studies and re-evaluations of the practice of diagnostic ultrasound.



QUANTUM CONSCIOUSNESS

by Peter Smith The Consciousness Collective, 2015 ISBN 978-0-9943493-0-9 (188pp tpb) Avail: quantumconsciousness.com.au

Melbourne-based hypnotherapist and Life Between Lives facilitator Peter Smith has written his new book to help us remember that we are spiritual beings living in the physical world and are on an unfolding, dynamic journey into the vast fabric of the energetic cosmos.

Bringing together a synthesis of quantum physics and consciousness research, Smith highlights the work of leading figures in these fields.

The message that rings true is that time is an illusion and consciousness is held in the energetic field, not in the brain.

We live in a holographic universe where our beliefs create our reality, where we're all connected as part of a divine matrix, and where we exist simultaneously in other realms.

Smith has developed a model for the quantum consciousness (QC) experience: it requires a change in present consciousness, utilisation of four principles (the creator effect, "intanglement", "everywhereness" and holographic healing), and the establishment of expanded states of awareness that go beyond prevailing mindsets.

He describes what it's like to explore your personal universe, and he includes testimony that reflects journeys through varieties of consciousness, from stored, alternate and parallel to interdimensional, eternal and quantum.

The profound communication and connection possible for personal growth can have a ripple effect, helping humanity evolve in consciousness. Peter Smith offers empowering information and wisdom to help in this quest.

UNHEALTHY BETRAYAL

by Andrew Burgoyne Fundamental Press, UK, 2015 ISBN 978-0-9932539-0-4 (589pp pb) Avail: www.FundamentalHealth.org Amazon.co.uk, Amazon.com

Why is spending on health care rising, but so is ill health? Why are chronic illnesses, cancer, heart disease, obesity, diabetes and neurological problems increasing at alarming rates?

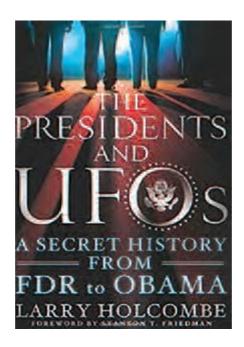
The answers can be found by taking a broad approach to what's wrong with our modern world, says UK author Andrew Burgoyne, whose background is in nutrition.

It's not just industrialised agriculture and distribution, the powerful medical-pharmaceutical establishment, untested genetically engineered foods and toxic chemicals that are to blame: it's also a dysfunctional economic system that's making it harder for people to afford nutritious, health-sustaining food, whether in richer or poorer countries.

Our existing monetary system, Burgoyne says, is leading to unsustainable levels of personal and government debt, with disastrous effects on individual and social health.

Corporations are allowed free rein to pollute the environment and promote their financial interests without recourse to safety or even scientific common sense.

Burgoyne sees great promise in "restorative economics", where money creation is removed from private banks, agricultural systems that promote soil regeneration are adopted, biodiversity is protected, green chemistry is promoted, secure employment is provided for all, and corporations are made legally liable for their irresponsible activities. His well-referenced book connects many apparently unrelated dots.



THE PRESIDENTS AND UFOs

by Larry Holcombe St Martin's Press, NY, USA, 2015 ISBN 978-1-250-04051-0 (338pp hc) Avail: www.stmartins.com Amazon.com

Back in the 1950s, Larry Holcombe became interested in ufology after reading Major Donald Keyhoe's *Flying Saucers Are Real* and *Flying Saucers from Outer Space.*

He kept his research to himself, but his fictional 2009 book, *The Great River Disclosure,* opened up new avenues and led to interesting contacts, one of them being nuclear physicist Stanton T. Friedman (who wrote the foreword to this book).

Holcombe covers the history of the UFO issue against the backdrop of US Presidents.

He begins with the Roosevelt administration when the President, aware of a UFO crash at Cape Girardeau, Missouri, in 1941 and then the Los Angeles air raid the next year, declared in a memo to General Marshall in 1942 that the "information is vital to the nation's superiority and must remain within the confines of state secrets". This set the scene for the decades ahead.

He includes President Eisenhower, who allegedly made contact with an ET at Holloman Air Force Base in 1955.

He also covers this period in light of the so-called Majestic Twelve documents that were released in 1999. He discusses President Kennedy's wish to share space and UFO secrets with the Soviet Union, and President Nixon's

plan for UFO disclosure.

Holcombe was stymied in his quest for feedback from living presidents on the UFO issue— unsurprising, seeing Presidents are kept out of the loop by their military-intelligence minders.

Holcombe thinks it's time for the US government at least to open its UFO files in a controlled manner, as other nations have already done.

THE THIRD WAY

by Joseph P. Farrell Adventures Unlimited Press, USA, 2015 ISBN 978-1-939149-48-0 (361pp tpb) Avail: AdventuresUnlimitedPress.com

In his new book, historian Dr Joseph P. Farrell expands on Nazi *International* (16/02) and his two *Covert Wars* books (20/03, 21/02), concluding that the Nazi International still exists.

He points to the pivotal August 1944 meeting of German industrialists and Nazi Party leaders in Strasbourg, when plans were struck to maintain their interests in a postwar Germany and Europe by creating a pan-European federation and currency zone under German leadership.

They capitalised on the sympathies of the American financial-corporate elite who shared their fascist ideology.

Their aim was to steer a "third way" between the Western and Communist blocs until a "European Reich" could be implemented. Dr Farrell is convinced they achieved their plans.

He explains that during World War II, US agencies and departments were pervasively infiltrated by Communist spies, who later battled the US Nazi faction.

He also reviews evidence that nuclear materials and related documents were flown to the USSR during the war. Dr Farrell draws parallels between secret Nazi physics experiments (the Bell project) and CERN's Large Hadron Collider, hinting that the "cosmology cartel" may be using the facility to siphon off data for some covert project paid for with stolen funds transferred via the Bank for International Settlements.

This is a compelling alternative history that helps us make sense of events going back even to the First World War, It's well worth reading.

DVDs Compiled by Duncan Roads

2015 NEXUS CONFERENCE

Produced by E&E Productions, SA, Australia, <u>www.eande.va.com.au</u> (15 DVDs, 60-90mins each) Available: NEXUS Magazine PO Box 30, Mapleton, Qld 4560, Australia tel +61 (0)7 5442 9280, website <u>www.nexusmagazine.com</u>

In late July 2015, hundreds gathered for our Conference on the Sunshine Coast of Queensland, Australia, for three days and two nights of inspiring talks and presentations.

1. Sacred Geometry and the Future, with Robert Lawlor. Robert explores India's ancient Yuga system of time cycles and compares it with Pythagorean harmonics and numbers.

2. Medicinal Marijuana Research & Findings, with Andrew Katelaris. Andrew has been active in promoting industrial hemp and medical marijuana since the late 1980s.

3. Aboriginal "Stonehenge", with Steven and Evan Strong. The Strongs have developed a coherent theory on how Australia's Aborigines are the Original *Homo sapiens.*

4. Expanding Realms of Consciousness Model, with Peter Smith. Peter covers alternative realities, parallel lives and research into the superconscious soul state.

5. Near-Death, Quantum Physics and Cellular Regeneration, with Dr Kathy J. Forti (USA). Dr Kathy Forti's Trinfinity8 device offers vibrational change on physical, emotional, mental and spiritual levels.

6. "FREE" Experiencer Research Study, with Mary Rodwell. Mary presents the latest findings assessing the content of child-ET encounters.

7. Megalithic Mysteries of the Ancient World, with David Hatcher Childress (USA). David shows evidence for a global high-tech civilisation before the last ice-age.

8. The Current Global Financial Situation, with Karen Mutton. Karen looks into bank bail-outs and bail-ins, financial cycles, conspiracy theories and economic sovereignty.

9. Solar as "Enabling" Technology, with Wolfgang Flatow. Wolfgang has been a researcher and inventor in the solar and alternative energy fields since the mid-1970s.

10. EMF Damage and the Blushield Device, with Donna Fisher. Donna has been campaigning against dangerous electromagnetic radiation for over 15 years and has written several books on the subject.

11. Were the Gods of Antiquity Astronauts?, with Erich von Daniken (Switzerland). Erich presents his amazing computer animations of *vimana* aircraft, visions of the biblical prophet Ezekiel and the writings of Enoch, discoveries inside and beneath the Great Pyramid, ancient cave paintings, and geoglyphs on the Nazca Plain in Peru and elsewhere.

12. Big Brother -Out of Control: Reality Check & Remedy, with Paul Seils (and Sacha Stone). Paul shares his perspective on his Middle East experience, global surveillance, the Trans-Pacific Partnership, and the risks to personal privacy from Australia's metadata laws. Sacha, via Skype, speaks of his new world view.

13. The House that Hack Built, with Stephen Parker. Smart devices can be turned against us, and the Internet of Things could become an Orwellian nightmare. Stephen covers voice and face recognition, remote-controlled houses and cars, and the latest approach to text and data capture via Facebook, Google, etc.

14. A Big Picture Analysis for the Future, with Duncan Roads. NEXUS editor explores the idea that humans were created as "loosh" emitters.

15. Summary Highlights of the Conference on a 90-minute DVD, including approximately five minutes of each speaker's presentation.





TAMBOLERO

by Toto La Momposina y sus Tambores Real World Records, 2015 (53mins) Distributors: Australia—The Planet Co. www.theplanetcompany.com UK—www.realworldrecords.com

Here is a special release of traditional cumbia music from Colombia's Caribbean coastline, with legendary singer Toto La Momposina and her musicians reviving her classic 1991-1992 recordings.

Toto's background is as a *cantadora*, a key figure in Colombian society. She acquired her knowledge of the community, natural medicine and music by moving from village to village. This album presents cumbia musical heritage with exquisite rhythm.

It comes with a booklet including archival photos. The music could be classed as *folclor* (or folklore) style, but the sleeve notes say that this word has evolved to *con flores,* meaning "with flowers". Toto is an artist in full bloom.

MELTING POT by Sol Nation MGM/Planet Company, 2015 (44mins) Distributors: Australia—The Planet Co. www.theplanetcompany.com www.solnation.com

Melbourne band Sol Nation has an irresistible, high-energy style and a strong conscience to right the world's wrongs.

The band offers a unique fusion of reggae, samba, funk, salsa, East Timorese and African dance music, straight

from their multicultural hometown.

The members have mixed backgrounds: the reggae experience of Paulo Almeida (The Dili Allstars), the rockiness of Colin Badger (Painters and Dockers), the fire of singer Deline Briscoe (The Black Arm Band), and more. The tracks "Sun Comes Up", "Peace & Unity" and "Spread the Word" are all likeable dance numbers.

JOI SOUND SYSTEM

by Joi Real World Records, UK, 2015 (2CDs, 66mins each) Distributors: Australia—The Planet Co. www.theplanetcompany.com UK—www.realworldrecords.com

Fusion artist Joi was huge in the UK in the 2000s. This 22-track double CD is a compilation of material recorded with his brother Haroon, who died in 1999, as well as from three of Joi's albums: *One and One is One, We Are Three* and *Without Zero.*

It combines electronica with traditional Indian instrumentation and modern British-Indian influences. Many memorable tracks such as the 1997 underground hit "A Desert Storm" are here, plus three bonuses including "Asian Vibes", a welcome classical addition. Great dance-party sounds.

LA RUMBA SOYO by Ricardo Lemvo & Makina Loca Cumbancha Music, 2014 (45mins) Distributors: Aust—The Planet Co.

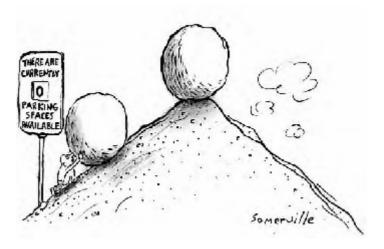
www.theplanetcompany.com USA— cumbancha.com; makinaloca.com

This new album from Ricardo Lemvo and his band Makina Loca was recorded in four countries. Born in Congo and based in Los Angeles, Ricardo has dived into his Angolan roots for songs in celebration of life.

He's created an exciting record that retains a salsa-meets-soukous groove that blends with the Angolan rhythms and styles that have been quite an inspiration to him in recent years. Cool dance and sway material.

Cartoons by Phil Somerville









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STATEMENT OF PURPOSE

NEXUS recognises that humanity is undergoing a massive transformation. With this in mind, NEXUS seeks to provide 'hard-to-get' information so as to assist people through these changes. NEXUS is not linked to any religious, philosophical or political ideology or organisation.

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